



CHANGE 1

EFFECTIVE: AUGUST 4, 1997

Part 141—Pilot Schools

This change incorporates Amendment 141-9, Pilot, Flight Instructor, Ground Instructor, and Pilot School Certification Rules; Correction, adopted July 11 and effective August 4, 1997. This amendment makes corrections to Amendment 141-8 which was adopted March 19 and effective August 4, 1997. The following sections have been corrected: 141.5, 141.31, 141.33, 141.35, 141.36, 141.38, 141.39, 141.41, 141.53, 141.63, 141.67, 141.75, 141.77, 141.79, 141.81, 141.83, 141.85, 141.91, 141.93, 141.95, 141.101, and Appendixes A, B, C, D, E, F, G, I, J, and K.

Bold brackets appear around revised or added material. The amendment number and effective date of these changes appear in bold brackets at the end of each affected section.

Page Control Chart

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Suggest filing this transmittal at the beginning of the FAR. It will provide a method for determining that all changes have been received as listed in the current edition of AC 00-44, Status of Federal Aviation Regulations, and a check for determining if the FAR contains the proper pages.

16220). That rule amended the certification, training, and experience requirements for pilots, flight instructors, and ground instructors, and the certification requirements for pilot schools approved by the FAA. The corrections incorporate provisions inadvertently omitted in the final rule, clarify certain provisions, and provide for the consistent use of terminology.

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SUPPLEMENTARY INFORMATION:

Background

On April 4, 1997, the FAA published a final rule titled "Pilot, Flight Instructor, Ground Instructor, and Pilot School Certification Rules; Final Rule" (62 FR 16220). Editorial and formatting corrections clarify the rules and make certain terminology consistent within parts 61 and 141. This document also incorporates certain provisions that were inadvertently omitted in the final rule. Those corrections that require explanation are discussed below.

Discussion of Corrections

Part 61

Terminology. References to "approved flight simulators" and "approved flight training devices" have been changed to "flight simulators" and "flight training devices," respectively. As defined in § 61.1(b)(5) and (b)(7), a flight simulator and a flight training device used to meet certain aeronautical experience requirements in part 61 must be evaluated, qualified, and approved by the Administrator. Therefore, use of the word "approved" is not necessary when referring to flight simulators and flight training devices in part 61. This change is consistent with the terminology used in part 142 of Title 14, Code of Federal Regulations (14 CFR). References to "instructor" have been changed to "authorized instructor" because only authorized instructors as defined in § 61.1(b)(2) may provide training. References to "required pilot," "required pilot crewmember," and "required flight crewmember" have been changed to "required pilot flight crewmember" to provide for consistency throughout part 61. In addition, references to "currency requirements" have been changed to "recent flight experience requirements" to accurately describe these requirements.

Section 61.1 Applicability and definitions. Paragraph (b)(3), which defines cross-country time, has been reorganized. In addition, the FAA expanded the definition to clarify what flight time may be logged as cross-country time for the purposes of meeting certain aeronautical experience requirements for the certificates and ratings issued under part 61. The FAA also added provisions for the logging of cross-country time for the purposes of exercising recreational pilot privileges under § 61.101(c).

The FAA notes that after August 4, 1997, cross-country time for pilots seeking an airline transport pilot (ATP) certificate (except with a rotorcraft rating) must involve a flight that is at least a straight-line distance of more than 50 nautical miles from the original point of departure. If the pilot is seeking an ATP certificate with a rotorcraft rating, the cross-country flight must include a landing that is at least a straight-line distance of more than 25 nautical miles from the original point of departure. Because pilots seeking an ATP certificate did not previously have to meet these distance requirements, any cross-country time logged before August 4, 1997, may be used to meet the ATP aeronautical experience requirements. However, after that date, cross-country time logged for the purposes of meeting the aeronautical experience requirements for an ATP certificate must comply with the distance requirements.

Section 61.2 Certification of foreign pilots, flight instructors, and ground instructors. The FAA has corrected the first sentence of paragraph (a) by adding the phrase "other than under § 61.75." This language, which was included in § 61.2 before the adoption of the final rule, is necessary to except

in paragraph (d)(2)(iii). Similarly, the FAA expanded the provisions of paragraph (i) to clarify what ground training and endorsements may be provided by individuals who do not hold a ground instructor certificate.

The FAA notes that the preamble to the final rule states that under paragraph (d) the phrase “other documentation acceptable to the Administrator” would permit a flight instructor to use a copy of a graduation certificate from a CFI refresher course and a copy of the completed application for renewal to meet the requirements of that paragraph. However, the FAA has determined that the latter document is not necessary. Therefore, a copy of a graduation certificate from a CFI refresher course, without the application for renewal, is acceptable documentation for the purpose of meeting the requirements of paragraph (d).

Section 61.11 Expired pilot certificates and reissuance. Paragraph (g) addresses the expiration of pilot certificates issued on the basis of a foreign license and, therefore, is more appropriately included in paragraph (c), which also addresses this issue. In making this correction, the FAA incorporated the language that was contained in §61.11 before the adoption of the final rule because that language more clearly explains the circumstances under which an expiration date will not be included on a pilot certificate that is issued on the basis of a foreign pilot license. The FAA also corrected paragraph (c) by adding at the end of the first sentence the phrase “unless otherwise specified on the U.S. certificate” to address previously issued special purpose pilot certificates that contain an expiration date.

Section 61.13 Issuance of airman certificates, ratings, and authorizations. This section has been reformatted to allow for the addition of paragraph headings. In addition, new paragraph (a)(2)(i) contains a reference to appendix A to part 187. That appendix references Advisory Circular No. 187-1, which contains a schedule of charges for the services of FAA aviation safety inspectors outside the United States.

Section 61.31 Type rating requirements, additional training, and authorization requirements. Paragraph (e) addresses exceptions to §61.31 and, therefore, has been redesignated as paragraph (k). Consequently, paragraphs (e) through (j) have been redesignated. The FAA added paragraph (k)(2)(v), which provides that the rating limitations of §61.31 do not apply to the holder of a recreational pilot certificate when operating under the provisions of §61.101(h). This exception for recreational pilots was included in §61.31 before the adoption of the final rule. In addition, new paragraph (g) is corrected by including an endorsement requirement for ground training received on the operation of pressurized aircraft at high altitudes. This requirement was included in §61.31(f) before the adoption of the final rule and was inadvertently omitted. New paragraphs (g) and (i) also have been reformatted to more clearly set forth the additional training requirements for operating pressurized aircraft capable of operating at high altitudes and for operating tailwheel airplanes.

Section 61.45 Practical tests: Required aircraft and equipment. The FAA added the phrase “unless otherwise authorized by the Administrator” at the beginning of paragraph (b). This language is necessary because some aircraft are not approved for all of the maneuvers required to be performed during a practical test. For example, an Airbus 300 is not approved for steep turns; however, the Administrator has determined that an applicant can receive a rating in an Airbus 300 without performing that maneuver. A similar provision was included in §61.13(c) before the adoption of the final rule but was inadvertently omitted when the provisions of that paragraph were incorporated into §61.45(b).

Section 61.51 Pilot logbooks. The FAA corrected paragraph (b)(1)(ii) to include “lesson time” as information to be recorded in logbook entries. This provision is necessary because simulator time and flight time are not synonymous. Training time acquired in a simulator must be logged as “lesson time” unless otherwise specified in part 61. For example, §61.109(i) permits certain training time acquired in a flight simulator or flight training device to be credited toward the flight training time requirements of that section.

The FAA notes that §61.51 no longer contains a provision for the logging of “other pilot time.” Few or no comments were received to the proposed deletion of this provision in Notice of Proposed

is consistent with the language used in other sections of part 61 to describe the activities of an individual who is receiving solo flight training in an airship.

Paragraph (e)(4) has been corrected to clarify when a student pilot may log pilot-in-command flight time. In addition, paragraph (e)(4)(iii) no longer contains the phrase "is logging pilot-in-command flight time to obtain the pilot-in-command flight experience requirements for a pilot certificate or aircraft rating." Because paragraph (e) permits a student pilot who is undergoing training for a pilot certificate or rating to log pilot-in-command flight time, this language is not necessary. The FAA notes that pilot-in-command flight time logged under paragraph (e) may be used to meet the pilot-in-command aeronautical experience requirements for additional certificates and ratings.

Paragraph (i)(3) has been reformatted and a provision has been added to provide that a recreational pilot also must carry his or her logbook when conducting operations under § 61.101(h). This correction is consistent with the requirement in § 61.101(i).

Section 61.55 Second-in-command qualifications. The FAA has deleted the reference to flight training devices in paragraph (b)(2). Amendment No. 61-100, "Aircraft Flight Simulator Use in Pilot Training, Testing, and Checking at Training Centers" (61 FR 34508, July 2, 1996), did not provide for the use of flight training devices to meet the recent flight experience requirements for pilots serving as second in command of an aircraft type certificated for more than one required pilot flight crewmember or in operations requiring a second in command. The reference to flight training devices was inadvertently included in the final rule. The FAA notes the use of flight simulators is permitted to meet the requirements of paragraph (b)(2).

In paragraph (b)(2)(i) the requirement for full-stop landings was inadvertently omitted from the recent flight experience requirements. This requirement was included in § 61.55(b)(2)(i) before the adoption of the final rule and the FAA did not propose deleting it in Notice No. 95-10. Therefore, the requirement for full-stop landings has been reinstated in the final rule.

Section 61.57 Recent flight experience: Pilot in command. As adopted in the final rule, the recent flight experience requirements of paragraph (a)(1) could be interpreted as precluding a pilot who does not meet those requirements from acting as second in command of an aircraft requiring more than one pilot flight crewmember. However, this was not the FAA's intention; therefore, the language in this paragraph has been corrected to provide that a person not meeting the requirements of § 61.57(a)(1) may not act as "a pilot in command of an aircraft carrying passengers or of an aircraft certificated for more than one pilot flight crewmember."

The FAA reorganized paragraph (b) to parallel the format of paragraph (a). In addition, the FAA added paragraph (b)(1) to require that a pilot must be the sole manipulator of the flight controls to meet the night takeoff and landing experience requirements. Paragraph (b)(2) has been added to require that the takeoff and landings are performed in the appropriate category, class, and type, if applicable, of aircraft. These requirements were included in § 61.57 before the adoption of the final rule and were proposed in Notice No. 95-10. The FAA did not intend to omit these requirements from the final rule.

The FAA notes that accomplishment of the night takeoff and landing requirements in paragraph (b) may be used to satisfy the requirements of paragraph (a). However, the accomplishment of the day takeoff and landings required in paragraph (a) may not be used to satisfy the requirements of paragraph (b).

Section 61.58 Pilot-in-command proficiency check: Operation of aircraft requiring more than one pilot flight crewmember. The FAA inadvertently omitted from paragraph (b) the exception for persons maintaining continuing qualification under an Advanced Qualification Program approved under Special Federal Aviation Regulation 58. In addition, the FAA added language to clarify that the pilot-in-command proficiency checks and tests specified in paragraphs (d)(1) through (d)(3) must be completed in an aircraft type certificated for more than one required pilot flight crewmember. Because § 61.58 only applies to

category rating with a balloon class rating and seeks an airship class rating must meet the training time requirements prescribed for an airship class rating. This requirement was included in § 61.63 before the adoption of the final rule and was inadvertently omitted.

As adopted in the final rule, an applicant for an additional type rating would be required to perform the practical test under "instrument flight rules." It was not the FAA's intention to require an applicant to file an instrument flight rules (IFR) flight plan. Section 61.63 did not contain such a requirement before the adoption of the final rule. The FAA has corrected paragraph (d)(5) to require that the practical test for an additional type rating must be performed in actual or simulated instrument conditions.

Former paragraph (i) has been deleted because it duplicated the provisions of paragraph (h). Paragraphs (j) through (l) have been redesignated as paragraphs (i) through (k). In addition, the section heading has been revised to more accurately reflect the content of the section.

Section 61.65 Instrument rating requirements. The FAA corrected paragraph (a)(1) to provide that a person applying for an instrument rating must only hold a private pilot certificate with an airplane, helicopter, or powered-lift rating as appropriate to the instrument rating sought. The previous language was more general and may have caused confusion because only airplane, helicopter, and powered-lift instrument ratings are issued on pilot certificates. For the same reason, equivalent changes have been made to paragraphs (a)(5) and (a)(8)(i).

The FAA also corrected paragraph (a)(8)(ii) to clarify that if a flight training device is used for the practical test, the instrument approach procedures are limited to one precision and one nonprecision approach. The words "instrument approach" were inadvertently omitted in the final rule. It was not the FAA's intent to limit all procedures accomplished in a flight training device to one precision and one nonprecision approach.

Section 61.69 Glider towing: Experience and training requirements. To meet the recent experience requirement for towing gliders, a pilot is required to meet the requirements of paragraph (a)(6)(i) or paragraph (a)(6)(ii). Paragraph (a)(6)(i) requires a pilot to perform three actual glider tows while accompanied by a qualified pilot. Paragraph (a)(6)(ii) requires a pilot to make at least three flights as pilot in command of a glider towed by an aircraft. In paragraph (a)(6)(i), the FAA inadvertently omitted the provision allowing pilots to meet the recent experience requirement by performing at least three simulated glider tows while accompanied by a qualified pilot. This provision was included in § 61.69 before adoption of the final rule and is necessary because not all glider clubs have two-place glider tow airplanes. In addition, a pilot who does not have a glider rating would not be able to meet the alternative recent experience requirement under paragraph (a)(6)(ii).

Section 61.73 Military pilots or former military pilots: Special rules. As adopted in the final rule, the language in paragraph (c)(2) inadvertently required an applicant to present documentation that he or she was on active military status during the 12 months preceding application for a pilot certificate or rating based on the applicant's military training. However, paragraph (c) specifically addresses the requirements for military pilots who were not on active military status during that time period. Paragraph (c)(2) has been corrected by incorporating language contained in § 61.73 before the adoption of the final rule.

Section 61.77 Special purpose pilot authorization: Operation of U.S.-registered civil aircraft leased by a person who is not a U.S. citizen. The FAA corrected paragraph (b) to clarify that an applicant must present to a Flight Standards District Office all documentation required to establish his or her eligibility for a special purpose pilot authorization.

Paragraph (d), which describes the circumstances under which a special purpose pilot authorization is valid, has been corrected to include several provisions that were contained in § 61.77 before adoption of the final rule and that were inadvertently omitted in the rulemaking process. Under new paragraph (d)(2) the holder of a special purpose pilot authorization must have the medical documentation required by paragraph (b) in his or her physical possession or immediately accessible in the aircraft while exercising

add the phrase "if applicable" at the conclusion of paragraphs (i)(4), (10), and (11).

The maneuvers described in paragraphs (i)(4) and (10) are required only if a student pilot is receiving training in a powered glider. The maneuver described in paragraph (i)(11) is required only if training is received in a nonpowered glider. In addition, paragraph (m)(3) has been deleted because it duplicated the endorsement requirement contained in paragraph (m)(4).

Section 61.93 Solo cross-country flight requirements. This section addresses the solo cross-country flight requirements for student pilots. Therefore, the FAA has removed paragraph (c)(2)(ii) because that paragraph addressed cross-country endorsement requirements for certificated pilots receiving training for an additional aircraft category and class rating. The endorsement requirements for pilots seeking additional aircraft ratings are contained in § 61.63.

Section 61.96 Applicability and eligibility requirements: General. The FAA has corrected paragraph (b)(6) to provide that an applicant for a recreational pilot certificate must meet the aeronautical experience requirements of § 61.99 before applying for the practical test. This requirement is consistent with the eligibility requirements for other certificates issued under part 61.

Section 61.109 Aeronautical experience. The introductory paragraph of this section, as adopted in the final rule, sets forth the total aeronautical experience requirements for persons seeking a private pilot certificate with an airplane, rotorcraft, or powered-lift category rating. However, this section also addresses the requirements for obtaining a private pilot certificate with a glider, airship, or balloon rating. Consequently, the FAA added introductory language to each of the paragraphs describing the total aeronautical requirements for the particular ratings. The FAA has not included any additional requirements for obtaining these ratings.

The FAA notes that the instrument training required by paragraphs (a)(3), (b)(3), and (e)(3) need not be provided by an authorized instructor who holds an instrument rating on his or her flight instructor's certificate. Instrument training for a private pilot certificate only requires training on basic instrument maneuvers such as straight and level flight, constant airspeed climbs and descents, turns to a heading, and recovery from unusual flight attitudes; therefore, the FAA does not require that such training be provided by an instructor who holds a flight instructor certificate with an instrument rating. The rule language of paragraphs (a)(3), (b)(3), and (e)(3) has been corrected to reflect this policy.

Section 61.110 Night flying exceptions. The FAA corrected paragraph (b)(2) to provide that a private pilot certificate issued with the limitation "Night flying prohibited" will become invalid for use if the pilot does not comply with the night flight training requirements within 12 calendar months after issuance of the certificate. It may have appeared from the language adopted in the final rule that the FAA would pursue an enforcement action to suspend the pilot certificate if the night flight training requirements were not met within the 12-month period. This is not the case; however, the pilot certificate will be invalid for use after that period until the pilot meets the night flight training requirements.

Section 61.129 Aeronautical experience. The FAA removed the references to the hours that may be credited for training received in a flight simulator or flight training device from paragraphs (a), (b), (c), and (e), which describe the total aeronautical experience requirements for obtaining a commercial pilot certificate with an airplane, helicopter, or powered-lift rating. It is no longer necessary to include this language because paragraph (i), which addresses the crediting of training received in a flight simulator or flight training device, was included in this section with the adoption of Amendment No. 61-100. In addition, the FAA corrected paragraphs (a)(2)(ii), (b)(2)(ii), and (e)(2)(ii) to provide that only 10 of the 50 hours of required cross-country flight for an airplane or powered-lift rating must be accomplished in the category of aircraft for which the applicant is seeking a rating.

Paragraphs (a)(3)(ii) and (b)(3)(ii) require that a person seeking a commercial pilot certificate with a single-engine or multiengine rating receive training in a complex aircraft. As adopted in the final rule, § 61.129 did not address those requirements as they apply to seaplanes. Therefore, the FAA added language to paragraphs (a)(3)(ii) and (b)(3)(ii) to provide that an applicant for a commercial pilot certificate

or powered-lift rating satisfactorily completes an approved commercial pilot course conducted by a training center certificated under part 142. However, the hours specified in paragraph (i)(3)(ii) did not result in a reduction in the total aeronautical experience requirements for applicants seeking a commercial pilot certificate with a helicopter rating. Therefore, the FAA removed the reference to the helicopter rating in paragraph (i)(3).

Section 61.131 Exceptions to the night flying requirements. The FAA corrected paragraph (b)(2) to provide that a commercial pilot certificate issued with the limitation "Night flying prohibited" will become invalid for use if the pilot does not comply with the night flight training requirements within 12 calendar months after issuance of the certificate. This correction is consistent with the change to § 61.110(b)(2).

Section 61.133 Commercial pilot privileges and limitations. A provision permitting a commercial pilot with a lighter-than-air category rating to provide training and endorsements for a flight review, operating privilege, or recency of experience requirements was inadvertently omitted from paragraphs (a)(2)(i) and (a)(2)(ii). The FAA added paragraphs (a)(2)(i)(E) and (a)(2)(ii)(D) to provide for these privileges.

Section 61.153 Eligibility requirements: General. The FAA inadvertently included the phrase "if the person holds a pilot license" in the eligibility requirements for pilots applying for an ATP certificate, and who hold a foreign ATP license or a foreign commercial pilot license and an instrument rating. This language was a superfluous addition and has been deleted. In addition, the requirement that the applicant hold the foreign pilot license and instrument rating without limitations was inadvertently omitted from the final rule. This language was included in § 61.155 before the adoption of the final rule and has been reinstated.

Section 61.157 Flight proficiency. As adopted in the final rule, an applicant for a type rating would be required to perform the practical test under "instrument flight rules." It was not the FAA's intention to require an applicant to file an IFR flight plan; therefore, the FAA has corrected paragraph (b)(3) to require that the practical test for an additional type rating be performed in actual or simulated instrument conditions.

In Amendment No. 61-101, "Aircraft Flight Simulator Use in Pilot Training, Testing, and Checking at Training Centers; Editorial and Other Changes" (62 FR 13788, March 21, 1997), the FAA revised § 61.157, in part, to provide that a check conducted under 14 CFR § 121.441 and used to satisfy the requirements of § 61.157 must be a pilot-in-command proficiency check. This requirement was inadvertently omitted from § 61.157 when the final rule was adopted. This requirement has been incorporated into paragraph (f)(1).

Section 61.165 Additional aircraft category and class ratings. The FAA corrected paragraphs (b) and (c) by removing the references to class ratings. This correction is necessary because a knowledge test is not required when a person who holds an ATP certificate seeks an additional class rating within the same aircraft category. The FAA has added paragraph (e) to address this situation.

Section 61.183 Eligibility requirements. The FAA has clarified the eligibility requirement contained in paragraph (c)(2) for persons seeking a flight instructor certificate. Under new paragraph (c)(2), an applicant is required to hold either a commercial pilot certificate with an instrument rating or an ATP certificate with instrument privileges on that applicant's pilot certificate that is appropriate to the flight instructor rating sought. The word "privileges" refers to the instrument privileges held by airline transport pilots.

The reference in paragraph (e) to § 61.185(a) has been corrected to read § 61.185(a)(1). This correction was necessary because not all applicants for a flight instructor certificate or rating are required to pass a knowledge test on the fundamentals of instruction as specified in § 61.185(a)(1). However, the FAA notes that all applicants are required to pass a knowledge test on the appropriate aeronautical knowledge areas in § 61.185(a)(2) and (3).

training for the issuance of an instrument rating or type rating not limited to conducting operations under VFR must hold an instrument rating on his or her pilot certificate and flight instructor certificate that is appropriate to the category and class of aircraft in which instrument training is provided.

Section 61.217 Recent experience requirements. It was not the FAA's intention to require a ground instructor to meet the recent experience requirements by demonstrating proficiency to an FAA inspector or a designated pilot examiner. Therefore, paragraph (b) has been corrected to provide that the holder of a ground instructor certificate may not perform the duties of a ground instructor unless within the preceding 12 months that person has received an endorsement from an authorized ground or flight instructor who certifies that the person has demonstrated proficiency in the subject areas prescribed in § 61.213(a)(3) and (a)(4).

Part 141

Terminology. References to "instructor" have been changed to "authorized instructor" because only authorized instructors as defined in § 61.1(b)(2) may provide training.

Section 141.31 Applicability. Paragraphs (b)(1) and (b)(2) have been clarified by specifying that a pilot school or provisional pilot school must, at the time of application, have ownership of, or a written lease agreement for, a facility or airport for at least the 6 calendar months beyond the date that the application for initial certification and renewal was made.

Section 141.35 Chief instructor qualifications. Paragraph (a)(1) has been corrected by specifying that a chief instructor must hold an instrument rating only if such a rating is applicable to the course of training for the particular category and class of aircraft in which he or she will instruct. The language in the amendment inadvertently resulted in a requirement that a chief pilot for a commercial pilot-helicopter course must hold an instrument rating. In addition, paragraph (a)(6) has been corrected to include airships among the class of aircraft for which a chief instructor is required to have only 40 percent of the hours specified in paragraphs (b) and (d) of the section; those paragraphs include requirements for instrument instruction. The requirement in paragraph (a)(6) has been changed because the FAA proposed an instrument rating for airships in Notice No. 95-11, but inadvertently neglected to omit that proposal in the final rule. Paragraphs (a)(6) and (7) also have been combined to remove a reference to paragraph (c) that addresses instrument ratings, which no longer apply to airships.

Section 141.36 Assistant chief instructor qualifications. Paragraph (a) has been corrected by specifying that an assistant chief instructor must hold an instrument rating only if such a rating is applicable to the course of training for the particular category and class of aircraft in which he or she will instruct. This change was necessary for the same reasons that the requirements of § 141.35(a) were changed for chief instructors.

Section 141.53 Approval procedures for a training course: General. Paragraph (c)(1) has been clarified by specifying that the retention of a course's approval until 1 year after August 4, 1997, when that training course is submitted for approval before August 4, 1997, is permitted, but not mandated, by the rule, which was never the FAA's intent.

Section 141.63 Examining authority qualification requirements. Paragraph (a)(5) has been corrected by replacing the word "after" with the word "before" because the paragraph lists the requirements that a school must meet before it can apply for examining authority.

Section 141.75 Aircraft requirements. This section has been changed by deleting paragraphs (b) and (c) because they contained provisions in § 141.39(b), to the extent that, at the time of application, the Administrator may permit a flight school's aircraft to hold airworthiness certificates that are other than standard or primary, if the Administrator determines that such types of aircraft may be used. This would include such specialized roles as agricultural, external-load, test-pilot, and special operations.

Section 141.77 Limitations. This section has been clarified by specifying the requirement for the manner in which a school may give credit for another school's certification. Specifically, this credit

incorporated a new definition for "flight simulators" and introduced a new definition for "flight training devices," with other training equipment falling under the definition of "training aids and equipment." As a result of these changes, the number of hours that could be credited for flight training devices based on the older definition of "ground trainers" no longer corresponded to the total number of hours that could be credited for training specified in part 141 before the amendment. Because this reduction was unintentional, the FAA is adjusting the amount of training permitted in flight training devices to avoid any reduction in the amount of training time that may be credited. To preserve the ratio of training time that may be credited in a part 141 course between flight training devices and flight simulators, the amount of training time that may be credited in a flight simulator also has been adjusted.

Appendix C to Part 141—Instrument Rating Course. Section No. 4, paragraph (b)(3) has been modified for the same reasons as appendix B, section No. 4, paragraphs (c)(2), (3), and (4).

Appendix D to Part 141—Commercial Pilot Certification Course. Section No. 3, paragraph (a) has been changed to reduce the hours of training required for the commercial pilot certification course for an airplane or powered-lift category rating, because candidates for the course are already required to hold an instrument rating before enrolling in the course. At the same time, a new section No. (a)(2) was created with increased hour requirements to provide for a lighter-than-air category with an airship class rating. This increase was inadvertently omitted from the final rule, and is a result of the FAA's decision to withdraw the proposed instrument rating for the airship class. As a result, a commercial pilot certification course would require increased hours for airship class candidates. This would provide a comparable level of training and experience among pilots regardless of the rating obtained. Section No. 4, paragraph (a) has been changed for the same reasons. Paragraphs (c)(2), (3), and (4) have been modified for the same reasons as appendix B, section No. 4, paragraphs (c)(2), (3), and (4).

Appendix F to Part 141—Flight Instructor Certification Course. Section 4, paragraph (c)(6)(vii) has been clarified to include tows as well as launches, and to specify go-arounds "if applicable" because only certain gliders are motorized.

Appendix I to Part 141—Additional Aircraft Category or Class Rating Course. Section No. 3 has been corrected to clarify that an approved course for an additional aircraft category rating or additional class rating must include only the ground training time requirements and ground training on the aeronautical knowledge areas that are specific to that aircraft category and class rating and pilot certificate level for which the course applies as provided in appendixes A, B, D, or E of this part. It was not the FAA's intent to require that the course for an additional rating include the total ground training time requirements for the pilot certificate. Section No. 4, paragraph (a) has been corrected for reasons similar to those discussed in the preamble of the corrections to Section No. 3. In addition, paragraphs (b)(2), (3), and (4) have been modified for the same reasons as appendix B, section No. 4, paragraphs (c)(2), (3), and (4).

Correction of Publication

Accordingly, in *Federal Register* Doc. No. 97-7450, published on April 4, 1997, corrections are made effective August 4, 1997.

Part 141—Pilot Schools

Subpart A—General

Source: Docket No. 25910, 62 FR 16220, 4/4/97 [Effective 8/4/97], unless otherwise noted.

§ 141.1 Applicability.

This part prescribes the requirements for issuing pilot school certificates, provisional pilot school certificates, and associated ratings, and the general operating rules applicable to a holder of a certificate or rating issued under this part.

§ 141.3 Certificate required.

No person may operate as a certificated pilot school without, or in violation of, a pilot school certificate or provisional pilot school certificate issued under this part.

§ 141.5 Requirements for a pilot school certificate.

An applicant may be issued a pilot school certificate with associated ratings if the applicant:

(a) Completes the application for a pilot school certificate on a form and in a manner prescribed by the Administrator;

(b) Holds a provisional pilot school certificate, issued under this part, for at least 24 calendar months preceding the month in which the application for a pilot school certificate is made;

(c) Meets the applicable requirements of subparts A through C of this part for the school ratings sought; and

(d) Has trained and recommended for pilot certification and rating tests, within 24 calendar months preceding the month the application is made for the pilot school certificate, at least 10 students for a knowledge or practical test for a pilot certificate, flight instructor certificate, ground instructor certificate, an additional rating, an end-of-course test for a training course specified in appendix K [to] this part, or any combination of those tests, and at least 80 percent of all tests administered were passed on the first attempt.

[(Amdt. 141-9, Eff. 8/4/97)]

§ 141.7 Provisional pilot school certificate.

An applicant that meets the applicable requirements of subparts A, B, and C of this part, but does not meet the recent training activity requirements of § 141.5(d) of this part, may be issued a provisional pilot school certificate with ratings.

§ 141.9 Examining authority.

An applicant is issued examining authority for its pilot school certificate if the applicant meets the requirements of subpart D of this part.

§ 141.11 Pilot school ratings.

(a) The ratings listed in paragraph (b) of this section may be issued to an applicant for:

(1) A pilot school certificate, provided the applicant meets the requirements of § 141.5 of this part; or

(2) A provisional pilot school certificate, provided the applicant meets the requirements of § 141.7 of this part.

(b) An applicant may be authorized to conduct the following courses:

(1) *Certification and rating courses.* (Appendixes A through J).

(i) Recreational pilot course.

(ii) Private pilot course.

(iii) Commercial pilot course.

(iv) Instrument rating course.

(v) Airline transport pilot course.

(vi) Flight instructor course.

(vii) Flight instructor instrument course.

(viii) Ground instructor course.

(ix) Additional aircraft category or class rating course.

(x) Aircraft type rating course.

(2) *Special preparation courses.* (Appendix K).

(i) Pilot refresher course.

(ii) Flight instructor refresher course.

(iii) Ground instructor refresher course.

(iv) Agricultural aircraft operations course.

(a) Application for an original certificate and rating, an additional rating, or the renewal of a certificate under this part must be made on a form and in a manner prescribed by the Administrator.

(b) Application for the issuance or amendment of a certificate or rating must be accompanied by two copies of each proposed training course curriculum for which approval is sought.

§ 141.15 Location of facilities.

The holder of a pilot school certificate or a provisional pilot school certificate may have a base or other facilities located outside the United States, provided the Administrator determines the location of the base and facilities at that place are needed for the training of students who are citizens of the United States.

§ 141.17 Duration of certificate and examining authority.

(a) Unless surrendered, suspended, or revoked, a pilot school's certificate or a provisional pilot school's certificate expires:

(1) On the last day of the 24th calendar month from the month the certificate was issued;

(2) Except as provided in paragraph (b) of this section, on the date that any change in ownership of the school occurs;

(3) On the date of any change in the facilities upon which the school's certificate is based occurs; or

(4) Upon notice by the Administrator that the school has failed for more than 60 days to maintain the facilities, aircraft, or personnel required for any one of the school's approved training courses.

(b) A change in the ownership of a pilot school or provisional pilot school does not terminate that school's certificate if, within 30 days after the date that any change in ownership of the school occurs:

(1) Application is made for an appropriate amendment to the certificate; and

(2) No change in the facilities, personnel, or approved training courses is involved.

If the holder of a certificate issued under this part permits any aircraft owned or leased by that holder to be engaged in any operation that the certificate holder knows to be in violation of § 91.19(a) of this chapter, that operation is a basis for suspending or revoking the certificate.

§ 141.19 Display of certificate.

(a) Each holder of a pilot school certificate or a provisional pilot school certificate must display that certificate in a place in the school that is normally accessible to the public and is not obscured.

(b) A certificate must be made available for inspection upon request by:

(1) The Administrator;

(2) An authorized representative of the National Transportation Safety Board; or

(3) A Federal, State, or local law enforcement officer.

§ 141.21 Inspections.

Each holder of a certificate issued under this part must allow the Administrator to inspect its personnel, facilities, equipment, and records to determine the certificate holder's:

(a) Eligibility to hold its certificate;

(b) Compliance with 49 U.S.C. 40101 *et seq.*, formerly the Federal Aviation Act of 1958, as amended; and

(c) Compliance with the Federal Aviation Regulations.

§ 141.23 Advertising limitations.

(a) The holder of a pilot school certificate or a provisional pilot school certificate may not make any statement relating to its certification and ratings that is false or designed to mislead any person contemplating enrollment in that school.

(b) The holder of a pilot school certificate or a provisional pilot school certificate may not advertise that the school is certificated unless it clearly differentiates between courses that have been approved under part 141 of this chapter and those

(2) All indications (including signs), wherever located, that the school is certificated by the Administrator when its certificate has expired or has been surrendered, suspended, or revoked.

§ 141.25 Business office and operations base.

(a) Each holder of a pilot school or a provisional pilot school certificate must maintain a principal business office with a mailing address in the name shown on its certificate.

(b) The facilities and equipment at the principal business office must be adequate to maintain the files and records required to operate the business of the school.

(c) The principal business office may not be shared with, or used by, another pilot school.

(d) Before changing the location of the principal business office or the operations base, each certificate holder must notify the FAA Flight Standards District Office having jurisdiction over the area of the new location, and the notice must be:

(1) Submitted in writing at least 30 days before the change of location; and

(2) Accompanied by any amendments needed for the certificate holder's approved training course outline.

(e) A certificate holder may conduct training at an operations base other than the one specified in its certificate, if:

(1) The Administrator has inspected and approved the base for use by the certificate holder; and

(2) The course of training and any needed amendments have been approved for use at that base.

§ 141.26 Training agreements.

A training center certificated under part 142 of this chapter may provide the training, testing, and checking for pilot schools certificated under part 141 of this chapter, and is considered to meet the requirements of part 141, provided—

(a) There is a training agreement between the certificated training center and the pilot school;

under part 142, and

(d) Upon completion of the training, testing, and checking conducted under part 142, a copy of each student's training record is forwarded to the part 141 school and becomes part of the student's permanent training record.

§ 141.27 Renewal of certificates and ratings.

(a) *Pilot school.*

(1) A pilot school may apply for renewal of its school certificate and ratings within 30 days preceding the month the pilot school's certificate expires, provided the school meets the requirements prescribed in paragraph (a)(2) of this section for renewal of its certificate and ratings.

(2) A pilot school may have its school certificate and ratings renewed for an additional 24 calendar months if the Administrator determines the school's personnel, aircraft, facility and airport, approved training courses, training records, and recent training ability and quality meet the requirements of this part.

(3) A pilot school that does not meet the renewal requirements in paragraph (a)(2) of this section, may apply for a provisional pilot school certificate if the school meets the requirements of § 141.7 of this part.

(b) *Provisional pilot school.*

(1) Except as provided in paragraph (b)(3) of this section, a provisional pilot school may not have its provisional pilot school certificate or the ratings on that certificate renewed.

(2) A provisional pilot school may apply for a pilot school certificate and associated ratings provided that school meets the requirements of § 141.5 of this part.

(3) A former provisional pilot school may apply for another provisional pilot school certificate, provided 180 days have elapsed since its last provisional pilot school certificate expired.

§ 141.29 [Reserved]

§ 141.31 Applicability.

(a) This subpart prescribes:

(1) The personnel and aircraft requirements for a pilot school certificate or a provisional pilot school certificate; and

(2) The facilities that a pilot school or provisional pilot school must have available on a continuous basis.

(b) As used in this subpart, to have continuous use of a facility, including an airport, the school must have:

(1) [Ownership of the facility or airport for at least 6 calendar months after the date the application for initial certification and on the date of renewal of the school's certificate is made; or

(2) [A written lease agreement for the facility or airport for at least 6 calendar months after the date the application for initial certification and on the date of renewal of the school's certificate is made.]

[(Amdt. 141-9, Eff. 8/4/97)]

§ 141.33 Personnel.

(a) An applicant for a pilot school certificate or for a provisional pilot school certificate must meet the following personnel requirements:

(1) Each applicant must have adequate personnel, including certificated flight instructors, certificated ground instructors, or holders of a commercial pilot certificate with a lighter-than-air rating, and a chief instructor for each approved course of training who is qualified and competent to perform the duties to which that instructor is assigned.

(2) If the school employs dispatchers, aircraft handlers, and line and service personnel, then it [must] instruct those persons in the procedures and responsibilities of their employment.

(3) Each instructor to be used for ground or flight training must hold a flight instructor certificate, ground instructor certificate, or commercial pilot certificate with a lighter-than-air rating, as appropriate, with ratings for the approved course of training and any aircraft used in that course.

(b) An applicant for a pilot school certificate or for a provisional pilot school certificate [must] designate a chief instructor for each of the school's approved training courses, who must meet the requirements of § 141.35 of this part.

(c) When necessary, an applicant for a pilot school certificate or for a provisional pilot school certificate may designate a person to be an assistant chief instructor for an approved training course, provided that person meets the requirements of § 141.36 of this part.

(d) A pilot school and a provisional pilot school may designate a person to be a check instructor for conducting student stage checks, end-of-course tests, and instructor proficiency checks, provided:

(1) That person meets the requirements of § 141.37 of this part; and

(2) That school has a student enrollment of at least 50 students at the time designation is sought.

(e) A person, as listed in this section, may serve in more than one position for a school, provided that person is qualified for each position.

[(Amdt. 141-9, Eff. 8/4/97)]

§ 141.35 Chief instructor qualifications.

(a) To be eligible for designation as a chief instructor for a course of training, a person must meet the following requirements:

(1) [Hold a commercial pilot certificate or an airline transport pilot certificate, and, except for a chief instructor for a course of training solely for a lighter-than-air rating, a current flight instructor certificate. The certificates must contain the appropriate aircraft category and class ratings for the category and class of aircraft used in the course and an instrument rating, if an instrument rating is required for enrollment in the course of training;]

(2) Meet the pilot-in-command recent flight experience requirements of § 61.57 of this chapter;

(3) Pass a knowledge test on—

(i) Teaching methods;

skills and ability to train students on the flight procedures and maneuvers appropriate to the course;

(5) Except for a course of training for gliders, balloons, or airships, the chief instructor must meet the applicable requirements in paragraphs (b), (c), and (d) of this section; [and]

(6) [A chief instructor for a course of training for gliders, balloons, or airships is only required to have 40 percent of the hours required in paragraphs (b) and (d) of this section.]

(b) For a course of training leading to the issuance of a private pilot certificate or rating, a chief instructor must have:

(1) At least 1,000 hours as pilot in command; and

(2) Primary flight training experience, acquired as either a certificated flight instructor or an instructor in a military pilot flight training program, or a combination thereof, consisting of at least—

(i) 2 years and a total of 500 flight hours; or

(ii) 1,000 flight hours.

(c) For a course of training leading to the issuance of an instrument rating or a rating with instrument privileges, a chief instructor must have:

(1) At least 100 hours of flight time under actual or simulated instrument conditions;

(2) At least 1,000 hours as pilot in command; and

(3) Instrument flight instructor experience, acquired as either a certificated flight instructor-instrument or an instructor in a military pilot flight training program, or a combination thereof, consisting of at least—

(i) 2 years and a total of 250 flight hours; or

(ii) 400 flight hours.

(d) For a course of training other than those leading to the issuance of a private pilot certificate or rating, or an instrument rating or a rating with instrument privileges, a chief instructor must have:

(1) At least 2,000 hours as pilot in command; and

for a ground school course, a person must have 1 year of experience as a ground school instructor at a certificated pilot school.

[(Amdt. 141-9, Eff. 8/4/97)]

§ 141.36 Assistant chief instructor qualifications.

(a) To be eligible for designation as an assistant chief instructor for a course of training, a person must meet the following requirements:

(1) [Hold a commercial pilot or an airline transport pilot certificate and, except for the assistant chief instructor for a course of training solely for a lighter-than-air rating, a current flight instructor certificate. The certificates must contain the appropriate aircraft category, class, and instrument ratings if an instrument rating is required by the course of training for the category and class of aircraft used in the course;]

(2) Meet the pilot-in-command recent flight experience requirements of § 61.57 of this chapter;

(3) Pass a knowledge test on—

(i) Teaching methods;

(ii) Applicable provisions of the “Aeronautical Information Manual”; and

(iii) Applicable provisions of parts 61, 91, and 141 of this chapter; and

(iv) The objectives and approved course completion standards of the course for which the person seeks to obtain designation.

(4) Pass a proficiency test on the flight procedures and maneuvers appropriate to that course; and

(5) Meet the applicable requirements in paragraphs (b), (c), and (d) of this section. However, an assistant chief instructor for a course of training for gliders, balloons, or airships is only required to have 40 percent of the hours required in paragraphs (b) and ([d]) of this section.

(b) For a course of training leading to the issuance of a private pilot certificate or rating, an assistant chief instructor must have:

(1) At least 500 hours as pilot in command; and

instrument privileges, an assistant chief flight instructor must have:

- (1) At least 50 hours of flight time under actual or simulated instrument conditions;
- (2) At least 500 hours as pilot in command; and
- (3) Instrument flight instructor experience, acquired as either a certificated flight instructor-instrument or an instructor in a military pilot flight training program, or a combination thereof, consisting of at least—

- (i) 1 year and a total of 125 flight hours; or

- (ii) 200 flight hours.

(d) For a course of training other than one leading to the issuance of a private pilot certificate or rating, or an instrument rating or a rating with instrument privileges, an assistant chief instructor must have:

- (1) At least 1,000 hours as pilot in command; and

- (2) Flight training experience, acquired as either a certificated flight instructor or an instructor in a military pilot flight training program, or a combination thereof, consisting of at least—

- (i) 1½ years and a total of 500 flight hours; or

- (ii) 750 flight hours.

(e) To be eligible for designation as an assistant chief instructor for a ground school course, a person must have 6 months of experience as a ground school instructor at a certificated pilot school.

[(Amdt. 141-9, Eff. 8/4/97)]

§ 141.37 Check instructor qualifications.

(a) To be designated as a check instructor for conducting student stage checks, end-of-course tests, and instructor proficiency checks under this part, a person must meet the eligibility requirements of this section:

- (1) For checks and tests that relate to either flight or ground training, the person must pass a test, given by the chief instructor, on—

- (i) Teaching methods;

- (i) Meet the requirements in paragraph (a)(1) of this section;

- (ii) Hold a commercial pilot certificate or an airline transport pilot certificate and, except for a check instructor for a course of training for a lighter-than-air rating, a current flight instructor certificate. The certificates must contain the appropriate aircraft category, class, and instrument ratings for the category and class of aircraft used in the course;

- (iii) Meet the pilot-in-command recent flight experience requirements of § 61.57 of this chapter; and

- (iv) Pass a proficiency test, given by the chief instructor or assistant chief instructor, on the flight procedures and maneuvers of the approved training course for the designation sought.

(3) For checks and tests that relate to ground training, the person must—

- (i) Meet the requirements in paragraph (a)(1) of this section;

- (ii) Except for a course of training for a lighter-than-air rating, hold a current flight instructor certificate or ground instructor certificate with ratings appropriate to the category and class of aircraft used in the course; and

- (iii) For a course of training for a lighter-than-air rating, hold a commercial pilot certificate with a lighter-than-air category rating and the appropriate class rating.

(b) A person who meets the eligibility requirements in paragraph (a) of this section must:

- (1) Be designated, in writing, by the chief instructor to conduct student stage checks, end-of-course tests, and instructor proficiency checks; and

- (2) Be approved by the FAA Flight Standards District Office having jurisdiction over the school.

(c) A check instructor may not conduct a stage check or an end-of-course test of any student for whom the check instructor has:

- (1) Served as the principal instructor; or

(b) Each airport used for airplanes and gliders must have at least one runway or takeoff area that allows training aircraft to make a normal takeoff or landing under the following conditions at the aircraft's maximum certificated takeoff gross weight:

- (1) Under wind conditions of not more than 5 miles per hour;
- (2) [At temperatures in the operating area equal to the mean high temperature for the hottest month of the year;]
- (3) If applicable, with the powerplant operation, and landing gear and flap operation recommended by the manufacturer; and
- (4) In the case of a takeoff—
 - (i) With smooth transition from liftoff to the best rate of climb speed without exceptional piloting skills or techniques; and
 - (ii) Clearing all obstacles in the takeoff flight path by at least 50 feet.
- (c) Each airport must have a wind direction indicator that is visible from the end of each runway at ground level;
- (d) Each airport must have a traffic direction indicator when:
 - (1) The airport does not have an operating control tower; and
 - (2) UNICOM advisories are not available.
- (e) Except as provided in paragraph (f) of this section, each airport used for night training flights must have permanent runway lights;
- (f) An airport or seaplane base used for night training flights in seaplanes is permitted to use adequate nonpermanent lighting or shoreline lighting, if approved by the Administrator.

[(Amdt. 141-9, Eff. 8/4/97)]

§ 141.39 Aircraft.

[An applicant for a pilot school certificate or provisional pilot school certificate must show that each aircraft used by that school for flight training and solo flights meets the following requirements:]

- (a) Each aircraft must be registered as a civil aircraft in the United States;

subpart E of part 91 of this chapter that apply to aircraft operated for hire;

- (d) Each aircraft used in flight training must have at least two pilot stations with engine-power controls that can be easily reached and operated in a normal manner from both pilot stations; and

(e) Each aircraft used in a course involving IFR en route operations and instrument approaches must be equipped and maintained for IFR operations. For training in the control and precision maneuvering of an aircraft by reference to instruments, the aircraft may be equipped as provided in the approved course of training.

[(Amdt. 141-9, Eff. 8/4/97)]

§ 141.41 Flight simulators, flight training devices, and training aids.

An applicant for a pilot school certificate or a provisional pilot school certificate must show that its flight simulators, flight training devices, training aids, and equipment meet the following requirements:

- (a) *Flight simulators.* Each flight simulator used to obtain flight training credit allowed for flight simulators in an approved pilot training course curriculum must—

- (1) Be a full-size aircraft cockpit replica of a specific type of aircraft, or make, model, and series of aircraft;

- (2) Include the hardware and software necessary to represent the aircraft in ground operations and flight operations;

- (3) Use a force cueing system that provides cues at least equivalent to those cues provided by a 3 degree freedom of motion system;

- (4) [Use a visual system that provides at least a 45-degree horizontal field of view and a 30-degree vertical field of view simultaneously for each pilot; and]

- (5) Have been evaluated, qualified, and approved by the Administrator.

- (b) *Flight training devices.* Each flight training device used to obtain flight training credit allowed

(2) Need not have a force (motion) cueing or visual system; and

(3) Have been evaluated, qualified, and approved by the Administrator.

(c) *Training aids and equipment.* Each training aid, including any audiovisual aid, projector, tape recorder, mockup, chart, or aircraft component listed in the approved training course outline, must be accurate and appropriate to the course for which it is used.

[(Amdt. 141-9, Eff. 8/4/97)]

§ 141.43 Pilot briefing areas.

(a) An applicant for a pilot school certificate or provisional pilot school certificate must show that the applicant has continuous use of a briefing area located at each airport at which training flights originate that is:

(1) Adequate to shelter students waiting to engage in their training flights;

if it is available for use by any other pilot school during the period it is required for use by the applicant.

(c) The communication equipment required by paragraph (a)(3) of this section is not required if the briefing area and the flight service station are located on the same airport, and are readily accessible to each other.

§ 141.45 Ground training facilities.

An applicant for a pilot school or provisional pilot school certificate must show that:

(a) Each room, training booth, or other space used for instructional purposes is heated, lighted, and ventilated to conform to local building, sanitation, and health codes; and

(b) The training facility is so located that the students in that facility are not distracted by the training conducted in other rooms, or by flight and maintenance operations on the airport.

This subpart prescribes the curriculum and course outline requirements for the issuance of a pilot school certificate or provisional pilot school certificate and ratings.

§ 141.53 Approval procedures for a training course: General.

(a) *General.* An applicant for a pilot school certificate or provisional pilot school certificate must obtain the Administrator's approval of the outline of each training course for which certification and rating is sought.

(b) *Application.*

(1) An application for the approval of an initial or amended training course must be submitted in duplicate to the FAA Flight Standards District Office having jurisdiction over the area where the school is based.

(2) An application for the approval of an initial or amended training course must be submitted at least 30 days before any training under that course, or any amendment thereto, is scheduled to begin.

(3) An application for amending a training course must be accompanied by two copies of the amendment.

(c) *Training courses.*

(1) A training course submitted for approval prior to August 4, 1997 **[must]**, if approved, retain that approval until 1 year after August 4, 1997.

(2) An applicant for a pilot school certificate or provisional pilot school certificate may request approval of the training courses specified in § 141.11(b) of this part.

[(Amdt. 141-9, Eff. 8/4/97)]

§ 141.55 Training course: Contents.

(a) Each training course for which approval is requested must meet the minimum curriculum requirements in accordance with the appropriate appendix of this part.

(e) of this section, each training course for which approval is requested must meet the minimum ground and flight training time requirements in accordance with the appropriate appendix of this part.

(c) Each training course for which approval is requested must contain:

(1) A description of each room used for ground training, including the room's size and the maximum number of students that may be trained in the room at one time;

(2) A description of each type of audiovisual aid, projector, tape recorder, mockup, chart, aircraft component, and other special training aids used for ground training;

(3) A description of each flight simulator or flight training device used for training;

(4) A listing of the airports at which training flights originate and a description of the facilities, including pilot briefing areas that are available for use by the school's students and personnel at each of those airports;

(5) A description of the type of aircraft including any special equipment used for each phase of training;

(6) The minimum qualifications and ratings for each instructor assigned to ground or flight training; and

(7) A training syllabus that includes the following information—

(i) The prerequisites for enrolling in the ground and flight portion of the course that include the pilot certificate and rating (if required by this part), training, pilot experience, and pilot knowledge;

(ii) A detailed description of each lesson, including the lesson's objectives, standards, and planned time for completion;

(iii) A description of what the course is expected to accomplish with regard to student learning;

(iv) The expected accomplishments and the standards for each stage of training; and

(1) The school holds a pilot school certificate issued under this part and has held that certificate for a period of at least 24 consecutive calendar months preceding the month of the request;

(2) In addition to the information required by paragraph (c) of this section, the training course specifies planned ground and flight training time requirements for the course;

(3) The school does not request the training course to be approved for examining authority, nor may that school hold examining authority for that course; and

(4) The practical test or knowledge test for the course is to be given by—

(i) An FAA inspector; or

(ii) An examiner who is not an employee of the school.

(e) A certificated pilot school may request and receive final approval for any of the training courses of this part without specifying the minimum ground and flight training time requirements of this part, provided the following conditions are met:

(1) The school has held initial approval for that training course for at least 24 calendar months.

that test was given by—

(A) An FAA inspector; or

(B) An examiner who is not an employee of the school.

(3) In addition to the information required by paragraph (c) of this section, the training course specifies planned ground and flight training time requirements for the course.

(4) The school does not request that the training course be approved for examining authority nor may that school hold examining authority for that course.

§ 141.57 Special curricula.

An applicant for a pilot school certificate or provisional pilot school certificate may apply for approval to conduct a special course of airman training for which a curriculum is not prescribed in the appendixes of this part, if the applicant shows that the training course contains features that could achieve a level of pilot proficiency equivalent to that achieved by a training course prescribed in the appendixes of this part or the requirements of part 61 of this chapter.

§ 141.61 Applicability.

This subpart prescribes the requirements for the issuance of examining authority to the holder of a pilot school certificate, and the privileges and limitations of that examining authority.

§ 141.63 Examining authority qualification requirements.

(a) A pilot school must meet the following prerequisites to receive initial approval for examining authority:

(1) The school must complete the application for examining authority on a form and in a manner prescribed by the Administrator;

(2) The school must hold a pilot school certificate and rating issued under this part;

(3) The school must have held the rating in which examining authority is sought for at least 24 consecutive calendar months preceding the month of application for examining authority;

(4) The training course for which examining authority is requested may not be a course that is approved without meeting the minimum ground and flight training time requirements of this part; and

(5) Within 24 calendar months [before] the date of application for examining authority, that school must meet the following requirements—

(i) The school must have trained at least 10 students in the training course for which examining authority is sought and recommended those students for a pilot, flight instructor, or ground instructor certificate or rating; and

(ii) At least 90 percent of those students passed the required practical or knowledge test, or any combination thereof, for the pilot, flight instructor, or ground instructor certificate or rating on the first attempt, and that test was given by—

(A) An FAA inspector; or

(B) An examiner who is not an employee of the school.

(b) A pilot school must meet the following requirements to retain approval of its examining authority:

(1) The school must complete the application for renewal of its examining authority on a form and in a manner prescribed by the Administrator;

(2) The school must hold a pilot school certificate and rating issued under this part;

(3) The school must have held the rating for which [continued] examining authority is sought for at least 24 calendar months preceding the month of application for renewal of its examining authority; and

(4) The training course for which [continued] examining authority is requested may not be a course that is approved without meeting the minimum ground and flight training time requirements of this part.

[(Amdt. 141–9, Eff. 8/4/97)]

§ 141.65 Privileges.

A pilot school that holds examining authority may recommend a person who graduated from its course for the appropriate pilot, flight instructor, or ground instructor certificate or rating without taking the FAA knowledge test or practical test in accordance with the provisions of this subpart.

§ 141.67 Limitations and reports.

A pilot school that holds examining authority may only recommend the issuance of a pilot, flight instructor, or ground instructor certificate and rating to a person who does not take an FAA knowledge test or practical test, if the recommendation for the issuance of that certificate or rating is in accordance with the following requirements:

(a) The person graduated from a training course for which the pilot school holds examining authority.

(b) Except as provided in this paragraph, the person satisfactorily completed all the curriculum requirements of that pilot school's approved training course. A person who transfers from one part 141 approved pilot school to another part 141 approved pilot school may receive credit for that previous

(3) The receiving school determines (based on the person's performance on the knowledge and proficiency test required by paragraph (b)(2) of this section) the amount of credit to be awarded, and records that credit in the person's training record;

(4) The person who requests credit for previous pilot experience and knowledge obtained the experience and knowledge from another part 141 approved pilot school and training course; and

(5) The receiving school retains a copy of the person's training record from the previous school.

(c) Tests given by a pilot school that holds examining authority must be approved by the Administrator and be at least equal in scope, depth, and difficulty to the comparable knowledge and practical tests prescribed by the Administrator under part 61 of this chapter.

(d) A pilot school that holds examining authority may not use its knowledge or practical tests if the school:

(1) Knows, or has reason to believe, the test has been compromised; or

(2) Is notified by [an] FAA Flight Standards District Office that there is reason to believe or it is known that the test has been compromised.

(e) A pilot school that holds examining authority must maintain a record of all temporary airman

(iii) The training course from which the student graduated;

(iv) The name of person who conducted the knowledge or practical test;

(v) The type of temporary airman certificate or rating issued to the student; and

(vi) The date the student's airman application file was sent to the FAA for processing for a permanent airman certificate.

(2) A copy of the record containing each student's graduation certificate, airman application, temporary airman certificate, superseded airman certificate (if applicable), and knowledge test or practical test results; and

(3) The records required by paragraph (e) of this section must be retained for 1 year and made available to the Administrator upon request. These records must be surrendered to the Administrator when the pilot school ceases to have examining authority.

(f) Except for pilot schools that have an airman certification representative, when a student passes the knowledge test or practical test, the pilot school that holds examining authority must submit that student's airman application file and training record to the FAA for processing for the issuance of a permanent airman certificate.

[(Amdt. 141-9, Eff. 8/4/97)]

§ 141.71 Applicability.

This subpart prescribes the operating rules applicable to a pilot school or provisional pilot school certificated under the provisions of this part.

§ 141.73 Privileges.

(a) The holder of a pilot school certificate or a provisional pilot school certificate may advertise and conduct approved pilot training courses in accordance with the certificate and any ratings that it holds.

(b) A pilot school that holds examining authority for an approved training course may recommend a graduate of that course for the issuance of an appropriate pilot, flight instructor, or ground instructor certificate and rating, without taking an FAA knowledge test or practical test, provided the training course has been approved and meets the minimum ground and flight training time requirements of this part.

§ 141.75 Aircraft requirements.

The following items must be carried on each aircraft used for flight training and solo flights:

([a]) A pretakeoff and prelanding checklist; and

([b]) The operator's handbook for the aircraft, if one is furnished by the manufacturer, or copies of the handbook if furnished to each student using the aircraft.

[(Amdt. 141-9, Eff. 8/4/97)]

§ 141.77 Limitations.

(a) The holder of a pilot school certificate or a provisional pilot school certificate may not issue a graduation certificate to a student, or recommend a student for a pilot certificate or rating, unless the student has:

(1) Completed the training specified in the pilot school's course of training; and

(2) Passed the required final tests.

(b) Except as provided in paragraph (c) of this section, the holder of a pilot school certificate or a provisional pilot school certificate may not graduate a student from a course of training unless

the student has completed all of the curriculum requirements of that course;

(c) A student may be given credit towards the curriculum requirements of a course for previous pilot experience and knowledge, provided the following conditions are met:

(1) If the credit is based upon a part 141-approved training course, the credit given that student for the previous pilot experience and knowledge may be 50 percent of the curriculum requirements and must be based upon a proficiency test or knowledge test, or both, conducted by the receiving pilot school;

(2) If the credit is not based upon a part 141-approved training course, the credit given that student for the previous pilot experience and knowledge shall not exceed more than 25 percent of the curriculum requirements and must be based upon a proficiency test or knowledge test, or both, conducted by the receiving pilot school;

(3) The receiving school determines the amount of course credit to be transferred under paragraph (c)(1) or paragraph (c)(2) of this section, based on a proficiency test or knowledge test, or both, of the student; and

(4) [Credit for training specified in paragraph (c)(1) or paragraph (c)(2) of this section may be given only if the previous provider of the training has certified in writing, or other form acceptable to the Administrator as to the kind and amount of training provided, and the result of each stage check and end-of-course test, if applicable, given to the student.]

[(Amdt. 141-9, Eff. 8/4/97)]

§ 141.79 Flight training.

(a) No person other than a certificated flight instructor or commercial pilot with a lighter-than-air rating who has the ratings and the minimum qualifications specified in the approved training course outline may give a student flight training under an approved course of training.

(b) No student pilot may be authorized to start a solo practice flight from an airport until the flight has been approved by a certificated flight instructor

(d) Each certificated flight instructor or commercial pilot with a lighter-than-air rating who is assigned to a flight training course must satisfactorily complete the following tasks, which must be administered by the school's chief instructor, assistant chief instructor, or check instructor:

(1) [Prior to receiving authorization to train students in a flight training course, must—

(i) [Accomplish a review of and receive a briefing on the objectives and standards of that training course; and

(ii) [Accomplish an initial proficiency check in each make and model of aircraft used in that training course in which that person provides training; and]

(2) [Every 12 calendar months after the month in which the person last complied with the requirements of paragraph (d)(1)(ii) of this section, accomplish a recurrent proficiency check in one of the aircraft in which the person trains students.]

[(Amdt. 141-9, Eff. 8/4/97)]

§ 141.81 Ground training.

(a) [Except as provided in paragraph (b) of this section, each instructor who is assigned to a ground training course must hold a flight or ground instructor certificate, or a commercial pilot certificate with a lighter-than-air rating, with the appropriate rating for that course of training.]

(b) A person who does not meet the requirements of paragraph (a) of this section may be assigned ground training duties in a ground training course, if:

(1) The chief instructor who is assigned to that ground training course finds the person qualified to give that training; and

(2) The training is given while under the supervision of the chief instructor or the assistant chief instructor who is present at the facility when the training is given.

(c) [An instructor may not be used in a ground training course until that instructor has been briefed on the objectives and standards of that course by

and

(2) Provide training of such quality that meets the requirements of § 141.5(d) of this part.

(b) The failure of a pilot school or provisional pilot school to maintain the quality of training specified in paragraph (a) of this section may be the basis for suspending or revoking that school's certificate.

(c) When requested by the Administrator, a pilot school or provisional pilot school must allow the FAA to administer any knowledge test, practical test, stage check, or end-of-course test to its students.

(d) When a stage check or end-of-course test is administered by the FAA under the provisions of paragraph (c) of this section, and the student has not completed the training course, then that test will be based on the standards prescribed in the school's approved training course.

(e) [When a practical test or knowledge test is administered by the FAA under the provisions of paragraph (c) of this section, to a student who has completed the school's training course, that test will be based upon the areas of operation approved by the Administrator.]

[(Amdt. 141-9, Eff. 8/4/97)]

§ 141.85 Chief instructor responsibilities.

(a) Each person designated as a chief instructor for a pilot school or provisional pilot school shall be responsible for:

(1) [Certifying each student's training record, graduation certificate, stage check and end-of-course test report, recommendation for course completion, and application;

(2) [Ensuring that each certificated flight instructor, certificated ground instructor, or commercial pilot with a lighter-than-air rating passes an initial proficiency check prior to that instructor being assigned instructing duties in the school's approved training course, and thereafter that the instructor passes a recurrent proficiency check every 12 calendar months after the month in which the initial test was accomplished;]

instructor must be available at the pilot school or, if away from the pilot school, be available by telephone, radio, or other electronic means during the time that training is given for an approved training course.

(c) The chief instructor may delegate authority for conducting stage checks, end-of-course tests, and flight instructor proficiency checks to the assistant chief instructor or a check instructor.

[(Amdt. 141-9, Eff. 8/4/97)]

§ 141.87 Change of chief instructor.

Whenever a pilot school or provisional pilot school makes a change of designation of its chief instructor, that school:

(a) Must immediately provide the FAA Flight Standards District Office that has jurisdiction over the area in which the school is located with written notification of the change;

(b) May conduct training without a chief instructor for that training course for a period not to exceed 60 days while awaiting the designation and approval of another chief instructor;

(c) May, for a period not to exceed 60 days, have the stage checks and end-of-course tests administered by:

(1) The training course's assistant chief instructor, if one has been designated;

(2) The training course's check instructor, if one has been designated;

(3) An FAA inspector; or

(4) An examiner.

(d) Must, after 60 days without a chief instructor, cease operations and surrender its certificate to the Administrator; and

(e) May have its certificate reinstated, upon:

(1) Designating and approving another chief instructor;

(2) Showing it meets the requirements of § 141.27(a)(2) of this part; and

(3) Applying for reinstatement on a form and in a manner prescribed by the Administrator.

the holder's approved training course outline and the appropriate requirements of this part; and

(b) Except as provided in § 141.87 of this part, each chief instructor, assistant chief instructor, check instructor, or instructor meets the qualifications specified in the holder's approved course of training and the appropriate requirements of this part.

§ 141.91 Satellite bases.

The holder of a pilot school certificate or provisional pilot school certificate may conduct ground training or flight training in an approved course of training at a base other than its main operations base if:

(a) [An assistant chief instructor is designated for each satellite base, and that assistant chief instructor is available at that base or, if away from the premises, by telephone, radio, or other electronic means during the time that training is provided for an approved training course;]

(b) The airport, facilities, and personnel used at the satellite base meet the appropriate requirements of subpart B of this part and its approved training course outline;

(c) The instructors are under the direct supervision of the chief instructor or assistant chief instructor for the appropriate training course, who is readily available for consultation in accordance with § 141.85(b) of this part; and

(d) The FAA Flight Standards District Office having jurisdiction over the area in which the school is located is notified in writing if training is conducted at a base other than the school's main operations base for more than 7 consecutive days.

[(Amdt. 141-9, Eff. 8/4/97)]

§ 141.93 Enrollment.

(a) The holder of a pilot school certificate or a provisional pilot school certificate [must], at the time a student is enrolled in an approved training course, furnish that student with a copy of the following:

(1) A certificate of enrollment containing—

shall include training on at least the following information—

- (i) The weather minimums required by the school for dual and solo flights;
 - (ii) The procedures for starting and taxiing aircraft on the ramp;
 - (iii) Fire precautions and procedures;
 - (iv) Redispatch procedures after unprogrammed landings, on and off airports;
 - (v) **【Aircraft discrepancies and approval for return-to-service determinations;】**
 - (vi) Securing of aircraft when not in use;
 - (vii) Fuel reserves necessary for local and cross-country flights;
 - (viii) Avoidance of other aircraft in flight and on the ground;
 - (ix) Minimum altitude limitations and simulated emergency landing instructions; and
 - (x) A description of and instructions regarding the use of assigned practice areas.
- (b) The holder of a pilot school certificate or provisional pilot school certificate must maintain

its approved course of training.

(b) The graduation certificate must be issued to the student upon completion of the course of training and contain at least the following information:

- (1) The name of the school and the certificate number of the school;
- (2) The name of the graduate to whom it was issued;
- (3) The course of training for which it was issued;
- (4) The date of graduation;
- (5) A statement that the student has satisfactorily completed each required stage of the approved course of training including the tests for those stages;
- (6) A certification of the information contained on the graduation certificate by the chief instructor for that course of training; and
- (7) A statement showing the cross-country training that the student received in the course of training.

【(Amdt. 141-9, Eff. 8/4/97)】

(a) Each holder of a pilot school certificate or provisional pilot school certificate must establish and maintain a current and accurate record of the participation of each student enrolled in an approved course of training conducted by the school that includes the following information:

(1) The date the student was enrolled in the approved course;

(2) A chronological log of the student's course attendance, subjects, and flight operations covered in the student's training, and the names and grades of any tests taken by the student; and

(3) The date the student graduated, terminated training, or transferred to another school.

(b) The records required to be maintained in a student's logbook will not suffice for the record required by paragraph (a) of this section.

(c) Whenever a student graduates, terminates training, or transfers to another school, the student's record must be certified to that effect by the chief instructor.

(d) The holder of a pilot school certificate or a provisional pilot school certificate must retain each student record required by this section for at least 1 year from the date that the student:

(1) Graduates from the course to which the record pertains;

(2) Terminates enrollment in the course to which the record pertains; or

(3) Transfers to another school.

(e) **【The holder of a pilot school certificate or a provisional pilot school certificate must make a copy of the student's training record available upon request by the student.】**

【(Amdt. 141-9, Eff. 8/4/97)】

1. *Applicability.* This appendix prescribes the minimum curriculum required for a recreational pilot certification course under this part, for the following ratings:

- (a) Airplane single-engine.
- (b) Rotorcraft helicopter.
- (c) Rotorcraft gyroplane.

2. *Eligibility for enrollment.* A person must hold a student pilot certificate prior to enrolling in the flight portion of the recreational pilot certification course.

3. *Aeronautical knowledge training.* Each approved course must include at least 20 hours of ground training on the following aeronautical knowledge areas, appropriate to the aircraft category and class for which the course applies:

(a) Applicable Federal Aviation Regulations for recreational pilot privileges, limitations, and flight operations;

(b) Accident reporting requirements of the National Transportation Safety Board;

(c) Applicable subjects in the "Aeronautical Information Manual" and the appropriate FAA advisory circulars;

(d) Use of aeronautical charts for VFR navigation using pilotage with the aid of a magnetic compass;

(e) Recognition of critical weather situations from the ground and in flight, windshear avoidance, and the procurement and use of aeronautical weather reports and forecasts;

(f) Safe and efficient operation of aircraft, including collision avoidance, and recognition and avoidance of wake turbulence;

(g) Effects of density altitude on takeoff and climb performance;

(h) Weight and balance computations;

(i) Principles of aerodynamics, powerplants, and aircraft systems;

(j) Stall awareness, spin entry, spins, and spin recovery techniques, if applying for an airplane single-engine rating;

(k) Aeronautical decision making and judgment; and

(l) Preflight action that includes—

(1) How to obtain information on runway lengths at airports of intended use, data on takeoff and landing distances, weather reports and forecasts, and fuel requirements; and

(2) How to plan for alternatives if the planned flight cannot be completed or delays are encountered.

4. *Flight training.*

(a) [Each approved course must include at least 30 hours of flight training (of which 15 hours must be with a certificated flight instructor and 3 hours must be solo flight training as provided in section No. 5 of this appendix) on the approved areas of operation listed in paragraph (c) of this section that are appropriate to the aircraft category and class rating for which the course applies, including:]

(1) Except as provided in § 61.100 of this chapter, 2 hours of dual flight training to and at an airport that is located more than 25 nautical miles from the airport where the applicant normally trains, with at least three takeoffs and three landings; and

(2) 3 hours of dual flight training in an aircraft that is appropriate to the aircraft category and class for which the course applies, in preparation for the practical test within 60 days preceding the date of the test.

(b) Each training flight must include a preflight briefing and a postflight critique of the student by the flight instructor assigned to that flight.

(c) Flight training must include the following approved areas of operation appropriate to the aircraft category and class rating—

(1) *For an airplane single-engine course:*

- (i) Preflight preparation;
- (ii) Preflight procedures;
- (iii) Airport operations;
- (iv) Takeoffs, landings, and go-arounds;
- (v) Performance maneuvers;
- (vi) Ground reference maneuvers;
- (vii) Navigation;
- (viii) Slow flight and stalls;
- (ix) Emergency operations; and
- (x) Postflight procedures.

(2) *For a rotorcraft helicopter course:*

- (ix) Postflight procedures.
- (3) *For a rotorcraft gyroplane course:*
 - (i) Preflight preparation;
 - (ii) Preflight procedures;
 - (iii) Airport operations;
 - (iv) Takeoffs, landings, and go-arounds;
 - (v) Performance maneuvers;
 - (vi) Ground reference maneuvers;
 - (vii) Navigation;
 - (viii) Flight at slow airspeeds;
 - (ix) Emergency operations; and

(a) Each student enrolled in a recreational pilot course must satisfactorily accomplish the stage checks and end-of-course tests, in accordance with the school's approved training course, consisting of the approved areas of operation listed in paragraph (c) of section No. 4 of this appendix that are appropriate to the aircraft category and class rating for which the course applies.

(b) [Each student must demonstrate satisfactory proficiency prior to receiving an endorsement to operate an aircraft in solo flight.]

[(Amdt. 141-9, Eff. 8/4/97)]

1. *Applicability.* This appendix prescribes the minimum curriculum for a private pilot certification course required under this part, for the following ratings:

- (a) Airplane single-engine.
- (b) Airplane multiengine.
- (c) Rotorcraft helicopter.
- (d) Rotorcraft gyroplane.
- (e) Powered-lift.
- (f) Glider.
- (g) Lighter-than-air airship.
- (h) Lighter-than-air balloon.

2. *Eligibility for enrollment.* A person must hold a recreational or student pilot certificate prior to enrolling in the flight portion of the private pilot certification course.

3. *Aeronautical knowledge training.*

(a) Each approved course must include at least the following ground training on the aeronautical knowledge areas listed in paragraph (b) of this section, appropriate to the aircraft category and class rating:

- (1) 35 hours of training if the course is for an airplane, rotorcraft, or powered-lift category rating.
- (2) 15 hours of training if the course is for a glider category rating.
- (3) 10 hours of training if the course is for a lighter-than-air category with a balloon class rating.
- (4) 35 hours of training if the course is for a lighter-than-air category with an airship class rating.

(b) Ground training must include the following aeronautical knowledge areas:

- (1) Applicable Federal Aviation Regulations for private pilot privileges, limitations, and flight operations;
- (2) Accident reporting requirements of the National Transportation Safety Board;
- (3) Applicable subjects of the "Aeronautical Information Manual" and the appropriate FAA advisory circulars;

(4) Aeronautical charts for VFR navigation using pilotage, dead reckoning, and navigation systems;

(5) Radio communication procedures;

(6) Recognition of critical weather situations from the ground and in flight, windshear avoidance, and the procurement and use of aeronautical weather reports and forecasts;

(7) Safe and efficient operation of aircraft, including collision avoidance, and recognition and avoidance of wake turbulence;

(8) Effects of density altitude on takeoff and climb performance;

(9) Weight and balance computations;

(10) Principles of aerodynamics, powerplants, and aircraft systems;

(11) If the course of training is for an airplane category or glider category rating, stall awareness, spin entry, spins, and spin recovery techniques;

(12) Aeronautical decision making and judgment; and

(13) Preflight action that includes—

(i) How to obtain information on runway lengths at airports of intended use, data on takeoff and landing distances, weather reports and forecasts, and fuel requirements; and

(ii) How to plan for alternatives if the planned flight cannot be completed or delays are encountered.

4. *Flight training.*

(a) Each approved course must include at least the following flight training, as provided in this section and section No. 5 of this appendix, on the approved areas of operation listed in paragraph (d) of this section, appropriate to the aircraft category and class rating:

(1) 35 hours of training if the course is for an airplane, rotorcraft, powered-lift, or airship rating.

(2) 6 hours of training if the course is for a glider rating.

(3) 8 hours of training if the course is for a balloon rating.

in a single-engine airplane;

(ii) 3 hours of night flight training in a single-engine airplane that includes—

(A) One cross-country flight of more than 100-nautical-miles total distance; and

(B) 10 takeoffs and 10 landings to a full stop (with each landing involving a flight in the traffic pattern) at an airport.

(iii) 3 hours of instrument training in a single-engine airplane; and

(iv) 3 hours of flight training in a single-engine airplane in preparation for the practical test within 60 days preceding the date of the test.

(2) *For an airplane multiengine course:* 20 hours of flight training from a certificated flight instructor on the approved areas of operation in paragraph (d)(2) of this section that includes at least—

(i) Except as provided in § 61.111 of this chapter, 3 hours of cross-country flight training in a multiengine airplane;

(ii) 3 hours of night flight training in a multiengine airplane that includes—

(A) One cross-country flight of more than 100-nautical-miles total distance; and

(B) 10 takeoffs and 10 landings to a full stop (with each landing involving a flight in the traffic pattern) at an airport.

(iii) 3 hours of instrument training in a multiengine airplane; and

(iv) 3 hours of flight training in a multiengine airplane in preparation for the practical test within 60 days preceding the date of the test.

(3) *For a rotorcraft helicopter course:* 20 hours of flight training from a certificated flight instructor on the approved areas of operation in paragraph (d)(3) of this section that includes at least—

(i) Except as provided in § 61.111 of this chapter, 3 hours of cross-country flight training in a helicopter.

(ii) 3 hours of night flight training in a helicopter that includes—

hours of flight training from a certificated flight instructor on the approved areas of operation in paragraph (d)(4) of this section that includes at least—

(i) Except as provided in § 61.111 of this chapter, 3 hours of cross-country flight training in a gyroplane.

(ii) 3 hours of night flight training in a gyroplane that includes—

(A) One cross-country flight over 50-nautical-miles total distance; and

(B) 10 takeoffs and 10 landings to a full stop (with each landing involving a flight in the traffic pattern) at an airport.

(iii) 3 hours of flight training in a gyroplane in preparation for the practical test within 60 days preceding the date of the test.

(5) *For a powered-lift course:* 20 hours of flight training from a certificated flight instructor on the approved areas of operation in paragraph (d)(5) of this section that includes at least—

(i) Except as provided in § 61.111 of this chapter, 3 hours of cross-country flight training in a powered-lift;

(ii) 3 hours of night flight training in a powered-lift that includes—

(A) One cross-country flight of more than 100-nautical-miles total distance; and

(B) 10 takeoffs and 10 landings to a full stop (with each landing involving a flight in the traffic pattern) at an airport.

(iii) 3 hours of instrument training in a powered-lift; and

(iv) 3 hours of flight training in a powered-lift in preparation for the practical test, within 60 days preceding the date of the test.

(6) *For a glider course:* 4 hours of flight training from a certificated flight instructor on the approved areas of operation in paragraph (d)(6) of this section that includes at least—

(i) Five training flights in a glider on launch/tow procedures approved for the course and in the appropriate approved areas of operation listed in paragraph (d)(6) of this section; and

(i) Except as provided in § 141.41 of this chapter, 3 hours of cross-country flight training in an airship;

(ii) 3 hours of night flight training in an airship that includes—

(A) One cross-country flight over 25-nautical-miles total distance; and

(B) Five takeoffs and five landings to a full stop (with each landing involving a flight in the traffic pattern) at an airport.

(iii) 3 hours of instrument training in an airship; and

(iv) 3 hours of flight training in an airship in preparation for the practical test within 60 days preceding the date of the test.

(8) *For a lighter-than-air balloon course:* 8 hours of flight training, including at least five flights, from a commercial pilot with a balloon rating on the approved areas of operation in paragraph (d)(8) of this section, that includes—

(i) If the training is being performed in a gas balloon—

(A) Two flights of 1 hour each;

(B) One flight involving a controlled ascent to 3,000 feet above the launch site; and

(C) Two flights in preparation for the practical test within 60 days preceding the date of the test.

(ii) If the training is being performed in a balloon with an airborne heater—

(A) Two flights of 30 minutes each;

(B) One flight involving a controlled ascent to 2,000 feet above the launch site; and

(C) Two flights in preparation for the practical test within 60 days preceding the date of the test.

(c) For use of flight simulators or flight training devices:

(1) The course may include training in a flight simulator or flight training device, provided it is representative of the aircraft for which the course is approved, meets the requirements of this paragraph, and the training is given by an [authorized] instructor.

of the total flight training hour requirements of the approved course, or of this section, whichever is less.

(4) Training in flight simulators or flight training devices described in paragraphs (c)(2) and (c)(3) of this section, if used in combination, may be credited for a maximum of [20] percent of the total flight training hour requirements of the approved course, or of this section, whichever is less. However, credit for training in a flight training device that meets the requirements of § 141.41(b) cannot exceed the limitation provided for in paragraph (c)(3) of this section.

(d) Each approved course must include the flight training on the approved areas of operation listed in this paragraph that are appropriate to the aircraft category and class rating—

(1) *For a single-engine airplane course:*

(i) Preflight preparation;

(ii) Preflight procedures;

(iii) Airport and seaplane base operations;

(iv) Takeoffs, landings, and go-arounds;

(v) Performance maneuvers;

(vi) Ground reference maneuvers;

(vii) Navigation;

(viii) Slow flight and stalls;

(ix) Basic instrument maneuvers;

(x) Emergency operations;

(xi) Night operations, and

(xii) Postflight procedures.

(2) *For a multiengine airplane course:*

(i) Preflight preparation;

(ii) Preflight procedures;

(iii) Airport and seaplane base operations;

(iv) Takeoffs, landings, and go-arounds;

(v) Performance maneuvers;

(vi) Ground reference maneuvers;

(vii) Navigation;

(viii) Slow flight and stalls;

(ix) Basic instrument maneuvers;

(x) Emergency operations;

(xi) Multiengine operations;

(xii) Night operations; and

(xiii) Postflight procedures.

- (viii) Emergency operations;
- (ix) Night operations; and
- (x) Postflight procedures.
- (4) *For a rotorcraft gyroplane course:*
 - (i) Preflight preparation;
 - (ii) Preflight procedures;
 - (iii) Airport operations;
 - (iv) Takeoffs, landings, and go-arounds;
 - (v) Performance maneuvers;
 - (vi) Ground reference maneuvers;
 - (vii) Navigation;
 - (viii) Flight at slow airspeeds;
 - (ix) Emergency operations;
 - (x) Night operations; and
 - (xi) Postflight procedures.
- (5) *For a powered-lift course:*
 - (i) Preflight preparation;
 - (ii) Preflight procedures;
 - (iii) Airport and heliport operations;
 - (iv) Hovering maneuvers;
 - (v) Takeoffs, landings, and go-arounds;
 - (vi) Performance maneuvers;
 - (vii) Ground reference maneuvers;
 - (viii) Navigation;
 - (ix) Slow flight and stalls;
 - (x) Basic instrument maneuvers;
 - (xi) Emergency operations;
 - (xii) Night operations; and
 - (xiii) Postflight procedures.
- (6) *For a glider course:*
 - (i) Preflight preparation;
 - (ii) Preflight procedures;
 - (iii) Airport and gliderport operations;
 - (iv) Launches/tows, as appropriate, and landings;
 - (v) Performance speeds;
 - (vi) Soaring techniques;
 - (vii) Performance maneuvers;
 - (viii) Navigation;
 - (ix) Slow flight and stalls;
 - (x) Emergency operations; and
 - (xi) Postflight procedures.
- (7) *For a lighter-than-air airship course:*

- (ix) Postflight procedures.
- (8) *For a lighter-than-air balloon course:*
 - (i) Preflight preparation;
 - (ii) Preflight procedures;
 - (iii) Airport operations;
 - (iv) Launches and landings;
 - (v) Performance maneuvers;
 - (vi) Navigation;
 - (vii) Emergency operations; and
 - (viii) Postflight procedures.

5. *Solo flight training.* Each approved course must include at least the following solo flight training:

(a) *For an airplane single-engine course:* 5 hours of solo flight training in a single-engine airplane on the approved areas of operation in paragraph (d)(1) of section No. 4 of this appendix that includes at least—

(1) One solo cross-country flight of at least 100 nautical miles with landings at a minimum of three points, and one segment of the flight consisting of a straight-line distance of at least 50 nautical miles between the takeoff and landing locations; and

(2) Three takeoffs and three landings to a full stop (with each landing involving a flight in the traffic pattern) at an airport with an operating control tower.

(b) *For an airplane multiengine course:* 5 hours of flight training in a multiengine airplane performing the functions of a pilot in command while under the supervision of a certificated flight instructor. The training [must] consist of the approved areas of operation in paragraph (d)(2) of section No. 4 of this appendix, and include at least—

(1) One cross-country flight of at least 100 nautical miles with landings at a minimum of three points, and one segment of the flight consisting of a straight-line distance of at least 50 nautical miles between the takeoff and landing locations; and

(2) Three takeoffs and three landings to a full stop (with each landing involving a flight in the traffic pattern) at an airport with an operating control tower.

consisting of a straight-line distance of at least 25 nautical miles between the takeoff and landing locations; and

(2) Three takeoffs and three landings to a full stop (with each landing involving a flight in the traffic pattern) at an airport with an operating control tower.

(d) *For a rotorcraft gyroplane course:* 5 hours of solo flight training in gyroplanes on the approved areas of operation in paragraph (d)(4) of section No. 4 of this appendix that includes at least—

(1) One solo cross-country flight of more than 50 nautical miles with landings at a minimum of three points, and one segment of the flight consisting of a straight-line distance of at least 25 nautical miles between the takeoff and landing locations; and

(2) Three takeoffs and three landings to a full stop (with each landing involving a flight in the traffic pattern) at an airport with an operating control tower.

(e) *For a powered-lift course:* 5 hours of solo flight training in a powered-lift on the approved areas of operation in paragraph (d)(5) of section No. 4 of this appendix that includes at least—

(1) One solo cross-country flight of at least 100 nautical miles with landings at a minimum of three points, and one segment of the flight consisting of a straight-line distance of at least 50 nautical miles between the takeoff and landing locations; and

(g) *For a lighter-than-air airship course:* 5 hours of flight training in an airship performing the functions of pilot in command while under the supervision of a commercial pilot with an airship rating. The training shall consist of the approved areas of operation in paragraph (d)(7) of section No. 4 of this appendix.

(h) *For a lighter-than-air balloon course:* Two solo flights in a balloon with an airborne heater if the course involves a balloon with an airborne heater, or, if the course involves a gas balloon, at least two flights in a gas balloon performing the functions of pilot in command while under the supervision of a commercial pilot with a balloon rating. The training shall consist of the approved areas of operation in paragraph (d)(8) of section No. 4 of this appendix, in the kind of balloon for which the course applies.

6. *Stage checks and end-of-course tests.*

(a) Each student enrolled in a private pilot course must satisfactorily accomplish the stage checks and end-of-course tests in accordance with the school's approved training course, consisting of the approved areas of operation listed in paragraph (d) of section No. 4 of this appendix that are appropriate to the aircraft category and class rating for which the course applies.

(b) **Each student must demonstrate satisfactory proficiency prior to receiving an endorsement to operate an aircraft in solo flight.**

[(Amdt. 141-9, Eff. 8/4/97)]

minimum curriculum for an instrument rating course and an additional instrument rating course, required under this part, for the following ratings:

- (a) Instrument—airplane.
- (b) Instrument—helicopter.
- (c) Instrument—powered-lift.

2. *Eligibility for enrollment.* A person must hold at least a private pilot certificate with an aircraft category and class rating appropriate to the instrument rating for which the course applies prior to enrolling in the flight portion of the instrument rating course.

3. *Aeronautical knowledge training.*

(a) Each approved course must include at least the following ground training on the aeronautical knowledge areas listed in paragraph (b) of this section appropriate to the instrument rating for which the course applies:

- (1) 30 hours of training if the course is for an initial instrument rating.
- (2) 20 hours of training if the course is for an additional instrument rating.

(b) Ground training must include the following aeronautical knowledge areas:

- (1) Applicable Federal Aviation Regulations for IFR flight operations;
- (2) Appropriate information in the "Aeronautical Information Manual";
- (3) Air traffic control system and procedures for instrument flight operations;
- (4) IFR navigation and approaches by use of navigation systems;
- (5) Use of IFR en route and instrument approach procedure charts;
- (6) Procurement and use of aviation weather reports and forecasts, and the elements of forecasting weather trends on the basis of that information and personal observation of weather conditions;
- (7) Safe and efficient operation of aircraft under instrument flight rules and conditions;
- (8) Recognition of critical weather situations and windshear avoidance;

ment; and

(10) Crew resource management, to include crew communication and coordination.

4. *Flight training.*

(a) Each approved course must include at least the following flight training on the approved areas of operation listed in paragraph (d) of this section, appropriate to the instrument-aircraft category and class rating for which the course applies:

(1) 35 hours of instrument training if the course is for an initial instrument rating.

(2) 15 hours of instrument training if the course is for an additional instrument rating.

(b) For the use of flight simulators or flight training devices—

(1) The course may include training in a flight simulator or flight training device, provided it is representative of the aircraft for which the course is approved, meets the requirements of this paragraph, and the training is given by an [authorized] instructor.

(2) Training in a flight simulator that meets the requirements of § 141.41(a) of this part may be credited for a maximum of 50 percent of the total flight training hour requirements of the approved course, or of this section, whichever is less.

(3) Training in a flight training device that meets the requirements of § 141.41(b) of this part may be credited for a maximum of [40] percent of the total flight training hour requirements of the approved course, or of this section, whichever is less.

(4) Training in flight simulators or flight training devices described in paragraphs (b)(2) and (b)(3) of this section, if used in combination, may be credited for a maximum of 50 percent of the total flight training hour requirements of the approved course, or of this section, whichever is less. However, credit for training in a flight training device that meets the requirements of § 141.41(b) cannot exceed the limitation provided for in paragraph (b)(3) of this section.

(c) Each approved course must include the following flight training—

that the course is approved for, and is performed under IFR;

(ii) Is a distance of at least 250 nautical miles along airways or ATC-directed routing with one segment of the flight consisting of at least a straight-line distance of 100 nautical miles between airports;

(iii) Involves an instrument approach at each airport; and

(iv) Involves three different kinds of approaches with the use of navigation systems.

(2) *For an instrument helicopter course:*

Instrument training time from a certificated flight instructor with an instrument rating on the approved areas of operation in paragraph (d) of this section including at least one cross-country flight that—

(i) Is in a helicopter and is performed under IFR;

(ii) Is a distance of at least 100 nautical miles along airways or ATC-directed routing with one segment of the flight consisting of at least a straight-line distance of 50 nautical miles between airports;

(iii) Involves an instrument approach at each airport; and

(iv) Involves three different kinds of approaches with the use of navigation systems.

(3) *For an instrument powered-lift course:*

Instrument training time from a certificated flight instructor with an instrument rating on the approved areas of operation in paragraph (d) of

at least a straight-line distance of 100 nautical miles between airports;

(iii) Involves an instrument approach at each airport; and

(iv) Involves three different kinds of approaches with the use of navigation systems.

(d) Each approved course must include the flight training on the approved areas of operation listed in this paragraph appropriate to the instrument aircraft category and class rating for which the course applies:

(1) Preflight preparation;

(2) Preflight procedures;

(3) Air traffic control clearances and procedures;

(4) Flight by reference to instruments;

(5) Navigation systems;

(6) Instrument approach procedures;

(7) Emergency operations; and

(8) Postflight procedures.

5. *Stage checks and end-of-course tests.* Each student enrolled in an instrument rating course must satisfactorily accomplish the stage checks and end-of-course tests, in accordance with the school's approved training course, consisting of the approved areas of operation listed in paragraph (d) of section No. 4 of this appendix that are appropriate to the aircraft category and class rating for which the course applies.

[(Amdt. 141-9, Eff. 8/4/97)]

1. *Applicability.* This appendix prescribes the minimum curriculum for a commercial pilot certification course required under this part, for the following ratings:

- (a) Airplane single-engine.
- (b) Airplane multiengine.
- (c) Rotorcraft helicopter.
- (d) Rotorcraft gyroplane.
- (e) Powered-lift.
- (f) Glider.
- (g) Lighter-than-air airship.
- (h) Lighter-than-air balloon.

2. *Eligibility for enrollment.* A person must hold the following prior to enrolling in the flight portion of the commercial pilot certification course:

- (a) At least a private pilot certificate; and
- (b) If the course is for a rating in an airplane or a powered-lift category, then the person must:
 - (1) Hold an instrument rating in the aircraft that is appropriate to the aircraft category rating for which the course applies; or
 - (2) Be concurrently enrolled in an instrument rating course that is appropriate to the aircraft category rating for which the course applies, and pass the required instrument rating practical test prior to completing the commercial pilot certification course.

3. *Aeronautical knowledge training.*

(a) Each approved course must include at least the following ground training on the aeronautical knowledge areas listed in paragraph (b) of this section, appropriate to the aircraft category and class rating for which the course applies:

- (1) [35 hours of training if the course is for an airplane category rating or a powered-lift category rating.
- (2) [65 hours of training if the course is for a lighter-than-air category with an airship class rating.
- (3) [30 hours of training if the course is for a rotorcraft category rating.
- (4) [20 hours of training if the course is for a glider category rating.

[(5) 20 hours of training if the course is for lighter-than-air category with a balloon class rating.]

(b) Ground training must include the following aeronautical knowledge areas:

- (1) Federal Aviation Regulations that apply to commercial pilot privileges, limitations, and flight operations;
- (2) Accident reporting requirements of the National Transportation Safety Board;
- (3) Basic aerodynamics and the principles of flight;
- (4) Meteorology, to include recognition of critical weather situations, windshear recognition and avoidance, and the use of aeronautical weather reports and forecasts;
- (5) Safe and efficient operation of aircraft;
- (6) Weight and balance computations;
- (7) Use of performance charts;
- (8) Significance and effects of exceeding aircraft performance limitations;
- (9) Use of aeronautical charts and a magnetic compass for pilotage and dead reckoning;
- (10) Use of air navigation facilities;
- (11) Aeronautical decision making and judgment;
- (12) Principles and functions of aircraft systems;
- (13) Maneuvers, procedures, and emergency operations appropriate to the aircraft;
- (14) Night and high-altitude operations;
- (15) Descriptions of and procedures for operating within the National Airspace System; and
- (16) Procedures for flight and ground training for lighter-than-air ratings.

4. *Flight training.*

(a) [Each approved course must include at least the following flight training, as provided in this section and section No. 5 of this appendix, on the approved areas of operation listed in paragraph (d) of this section that are appropriate to the aircraft category and class rating for which the course applies:

- (1) [120 hours of training if the course is for an airplane or powered-lift rating.

the following flight training:

(1) *For an airplane single-engine course:* 55 hours of flight training from a certificated flight instructor on the approved areas of operation listed in paragraph (d)(1) of this section that includes at least—

(i) 5 hours of instrument training in a single-engine airplane;

(ii) 10 hours of training in a single-engine airplane that has retractable landing gear, flaps, and a controllable pitch propeller, or is turbine-powered;

(iii) One cross-country flight in a single-engine airplane of at least a 2-hour duration, a total straight-line distance of more than 100 nautical miles from the original point of departure, and occurring in day VFR conditions;

(iv) One cross-country flight in a single-engine airplane of at least a 2-hour duration, a total straight-line distance of more than 100 nautical miles from the original point of departure, and occurring in night VFR conditions; and

(v) 3 hours in a single-engine airplane in preparation for the practical test within 60 days preceding the date of the test.

(2) *For an airplane multiengine course:* 55 hours of flight training from a certificated flight instructor on the approved areas of operation listed in paragraph (d)(2) of this section that includes at least—

(i) 5 hours of instrument training in a multiengine airplane;

(ii) 10 hours of training in a multiengine airplane that has retractable landing gear, flaps, and a controllable pitch propeller, or is turbine-powered;

(iii) One cross-country flight in a multiengine airplane of at least a 2-hour duration, a total straight-line distance of more than 100 nautical miles from the original point of departure, and occurring in day VFR conditions;

(iv) One cross-country flight in a multiengine airplane of at least a 2-hour duration, a total straight-line distance of more than 100

listed in paragraph (d)(3) of this section that includes at least—

(i) 5 hours of instrument training;

(ii) One cross-country flight in a helicopter of at least a 2-hour duration, a total straight-line distance of more than 50 nautical miles from the original point of departure and occurring in day VFR conditions;

(iii) One cross-country flight in a helicopter of at least a 2-hour duration, a total straight-line distance of more than 50 nautical miles from the original point of departure, and occurring in night VFR conditions; and

(iv) 3 hours in a helicopter in preparation for the practical test within 60 days preceding the date of the test.

(4) *For a rotorcraft gyroplane course:* 30 hours of flight training from a certificated flight instructor on the approved areas of operation listed in paragraph (d)(4) of this section that includes at least—

(i) 5 hours of instrument training;

(ii) One cross-country flight in a gyroplane of at least a 2-hour duration, a total straight-line distance of more than 50 nautical miles from the original point of departure, and occurring in day VFR conditions;

(iii) One cross-country flight in a gyroplane of at least a 2-hour duration, a total straight-line distance of more than 50 nautical miles from the original point of departure, and occurring in night VFR conditions; and

(iv) 3 hours in a gyroplane in preparation for the practical test within 60 days preceding the date of the test.

(5) *For a powered-lift course:* 55 hours of flight training from a certificated flight instructor on the approved areas of operation listed in paragraph (d)(5) of this section that includes at least—

(i) 5 hours of instrument training in a powered-lift;

(ii) One cross-country flight in a powered-lift of at least a 2-hour duration, a total straight-line distance of more than 100 nautical

the date of the test.

(6) *For a glider course:* 4 hours of flight training from a certificated flight instructor on the approved areas of operation in paragraph (d)(6) of this section, that includes at least—

(i) Five training flights in a glider on launch/tow procedures approved for the course and on the appropriate approved areas of operation listed in paragraph (d)(6) of this section; and

(ii) Three training flights in a glider in preparation for the practical test within the 60 days preceding the date of the test.

(7) *For a lighter-than-air airship course:* 55 hours of flight training in airships from a commercial pilot with an airship rating on the approved areas of operation in paragraph (d)(7) of this section that includes at least—

(i) 3 hours of instrument training in an airship;

(ii) One cross-country flight in an airship of at least a 1-hour duration, a total straight-line distance of more than 25 nautical miles from the original point of departure, and occurring in day VFR conditions; and

(iii) One cross-country flight in an airship of at least a 1-hour duration, a total straight-line distance of more than 25 nautical miles from the original point of departure, and occurring in night VFR conditions; and

(iv) 3 hours in an airship, in preparation for the practical test within 60 days preceding the date of the test.

(8) *For a lighter-than-air balloon course:* Flight training from a commercial pilot with a balloon rating on the approved areas of operation in paragraph (d)(8) of this section that includes at least—

(i) If the course involves training in a gas balloon:

(A) Two flights of 1 hour each;

(B) One flight involving a controlled ascent to at least 5,000 feet above the launch site; and

(C) Two flights in preparation for the practical test within 60 days preceding the date of the test.

(c) For the use of flight simulators or flight training devices:

(1) The course may include training in a flight simulator or flight training device, provided it is representative of the aircraft for which the course is approved, meets the requirements of this paragraph, and is given by an [authorized] instructor.

(2) Training in a flight simulator that meets the requirements of § 141.41(a) of this part may be credited for a maximum of [30] percent of the total flight training hour requirements of the approved course, or of this section, whichever is less.

(3) Training in a flight training device that meets the requirements of § 141.41(b) of this part may be credited for a maximum of [20] percent of the total flight training hour requirements of the approved course, or of this section, whichever is less.

(4) Training in the flight training devices described in paragraphs (c)(2) and (c)(3) of this section, if used in combination, may be credited for a maximum of [30] percent of the total flight training hour requirements of the approved course, or of this section, whichever is less. However, credit for training in a flight training device that meets the requirements of § 141.41(b) cannot exceed the limitation provided for in paragraph (c)(3) of this section.

(d) Each approved course must include the flight training on the approved areas of operation listed in this paragraph that are appropriate to the aircraft category and class rating—

(1) *For an airplane single-engine course:*

(i) Preflight preparation;

(ii) Preflight procedures;

(iii) Airport and seaplane base operations;

(iv) Takeoffs, landings, and go-arounds;

(v) Performance maneuvers;

(vi) Navigation;

(vii) Slow flight and stalls;

- (v) Performance maneuvers;
 - (vi) Navigation;
 - (vii) Slow flight and stalls;
 - (viii) Emergency operations;
 - (ix) Multiengine operations;
 - (x) High-altitude operations; and
 - (xi) Postflight procedures.
- (3) *For a rotorcraft helicopter course:*
- (i) Preflight preparation;
 - (ii) Preflight procedures;
 - (iii) Airport and heliport operations;
 - (iv) Hovering maneuvers;
 - (v) Takeoffs, landings, and go-arounds;
 - (vi) Performance maneuvers;
 - (vii) Navigation;
 - (viii) Emergency operations;
 - (ix) Special operations; and
 - (x) Postflight procedures.
- (4) *For a rotorcraft gyroplane course:*
- (i) Preflight preparation;
 - (ii) Preflight procedures;
 - (iii) Airport operations;
 - (iv) Takeoffs, landings, and go-arounds;
 - (v) Performance maneuvers;
 - (vi) Navigation;
 - (vii) Flight at slow airspeeds;
 - (viii) Emergency operations; and
 - (ix) Postflight procedures.
- (5) *For a powered-lift course:*
- (i) Preflight preparation;
 - (ii) Preflight procedures;
 - (iii) Airport and heliport operations;
 - (iv) Hovering maneuvers;
 - (v) Takeoffs, landings, and go-arounds;
 - (vi) Performance maneuvers;
 - (vii) Navigation;
 - (viii) Slow flight and stalls;
 - (ix) Emergency operations;
 - (x) High altitude operations;
 - (xi) Special operations; and
 - (xii) Postflight procedures.
- (6) *For a glider course:*
- (i) Preflight preparation;
- (x) Emergency operations; and
 - (xi) Postflight procedures.
- (7) *For a lighter-than-air airship course:*
- (i) Fundamentals of instructing;
 - (ii) Technical subjects;
 - (iii) Preflight preparation;
 - (iv) Preflight lessons on a maneuver to be performed in flight;
 - (v) Preflight procedures;
 - (vi) Airport operations;
 - (vii) Takeoffs, landings, and go-arounds;
 - (viii) Performance maneuvers;
 - (ix) Navigation;
 - (x) Emergency operations; and
 - (xi) Postflight procedures.
- (8) *For a lighter-than-air balloon course:*
- (i) Fundamentals of instructing;
 - (ii) Technical subjects;
 - (iii) Preflight preparation;
 - (iv) Preflight lesson on a maneuver to be performed in flight;
 - (v) Preflight procedures;
 - (vi) Airport operations;
 - (vii) Launches and landings;
 - (viii) Performance maneuvers;
 - (ix) Navigation;
 - (x) Emergency operations; and
 - (xi) Postflight procedures.
5. *Solo training.* Each approved course must include at least the following solo flight training:
- (a) *For an airplane single-engine course:* 10 hours of solo flight training in a single-engine airplane on the approved areas of operation in paragraph (d)(1) of section No. 4 of this appendix that includes at least—
- (1) One cross-country flight, if the training is being performed in the State of Hawaii, with landings at a minimum of three points, and one of the segments consisting of a straight-line distance of at least 150 nautical miles;
 - (2) One cross-country flight, if the training is being performed in a State other than Hawaii, with landings at a minimum of three points, and

the supervision of a certificated flight instructor. The training [must] consist of the approved areas of operation in paragraph (d)(2) of section No. 4 of this appendix, and include at least—

(1) One cross-country flight, if the training is being performed in the State of Hawaii, with landings at a minimum of three points, and one of the segments consisting of a straight-line distance of at least 150 nautical miles;

(2) One cross-country flight, if the training is being performed in a State other than Hawaii, with landings at a minimum of three points and one segment of the flight consisting of straight-line distance of at least 250 nautical miles; and

(3) 5 hours in night VFR conditions with 10 takeoffs and 10 landings (with each landing involving a flight with a traffic pattern) at an airport with an operating control tower.

(c) *For a rotorcraft helicopter course:* 10 hours of solo flight training in a helicopter on the approved areas of operation in paragraph (d)(3) of section No. 4 of this appendix that includes at least—

(1) One cross-country flight with landings at a minimum of three points and one segment of the flight consisting of a straight-line distance of at least 50 nautical miles from the original point of departure; and

(2) 5 hours in night VFR conditions with 10 takeoffs and 10 landings (with each landing involving a flight with a traffic pattern) at an airport with an operating control tower.

(d) *For a rotorcraft-gyroplane course:* 10 hours of solo flight training in a gyroplane on the approved areas of operation in paragraph (d)(4) of section No. 4 of this appendix that includes at least—

(1) One cross-country flight with landings at a minimum of three points, and one segment of the flight consisting of a straight-line distance of at least 50 nautical miles from the original point of departure; and

(2) 5 hours in night VFR conditions with 10 takeoffs and 10 landings (with each landing

segment of the flight consisting of a straight-line distance of at least 150 nautical miles;

(2) One cross-country flight, if the training is being performed in a State other than Hawaii, with landings at a minimum of three points, and one segment of the flight consisting of a straight-line distance of at least 250 nautical miles; and

(3) 5 hours in night VFR conditions with 10 takeoffs and 10 landings (with each landing involving a flight with a traffic pattern) at an airport with an operating control tower.

(f) *For a glider course:* 5 solo flights in a glider on the approved areas of operation in paragraph (d)(6) of section No. 4 of this appendix.

(g) *For a lighter-than-air airship course:* 10 hours of flight training in an airship, while performing the functions of pilot in command under the supervision of a commercial pilot with an airship rating. The training shall consist of the approved areas of operation in paragraph (d)(7) of section No. 4 of this appendix and include at least—

(1) One cross-country flight with landings at a minimum of three points, and one segment of the flight consisting of a straight-line distance of at least 25 nautical miles from the original point of departure; and

(2) 5 hours in night VFR conditions with 10 takeoffs and 10 landings (with each landing involving a flight with a traffic pattern).

(h) *For a lighter-than-air balloon course:* Two solo flights if the course is for a hot air balloon rating, or, if the course is for a gas balloon rating, at least two flights in a gas balloon, while performing the duties of pilot in command under the supervision of a commercial pilot with a balloon rating. The training shall consist of the approved areas of operation in paragraph (d)(8) of section No. 4 of this appendix, in the kind of balloon for which the course applies.

6. *Stage checks and end-of-course tests.*

(a) Each student enrolled in a commercial pilot course must satisfactorily accomplish the stage checks and end-of-course tests, in accordance with the school's approved training course, consisting of the approved areas of operation listed in para-

1. *Applicability.* This appendix prescribes the minimum curriculum for [an] airline transport pilot certification course under this part, for the following ratings:

- (a) Airplane single-engine.
- (b) Airplane multiengine.
- (c) Rotorcraft helicopter.
- (d) Powered-lift.

2. *Eligibility for enrollment.* Prior to enrolling in the flight portion of the airline transport pilot certification course, a person must:

(a) Meet the aeronautical experience requirements prescribed in subpart G of part 61 of this chapter for an airline transport pilot certificate that is appropriate to the aircraft category and class rating for which the course applies;

(b) Hold at least a commercial pilot certificate and an instrument rating;

(c) Meet the military experience requirements under § 61.73 of this chapter to qualify for a commercial pilot certificate and an instrument rating, if the person is a rated military pilot or former rated military pilot of an Armed Force of the United States; or

(d) Hold either a foreign airline transport pilot license or foreign commercial pilot license and an instrument rating, if the person holds a pilot license issued by a contracting State to the Convention on International Civil Aviation.

3. *Aeronautical knowledge areas.*

(a) Each approved course must include at least 40 hours of ground training on the aeronautical knowledge areas listed in paragraph (b) of this section, appropriate to the aircraft category and class rating for which the course applies.

(b) Ground training must include the following aeronautical knowledge areas:

(1) Applicable Federal Aviation Regulations of this chapter that relate to airline transport pilot privileges, limitations, and flight operations;

(2) Meteorology, including knowledge of and effects of fronts, frontal characteristics, cloud formations, icing, and upper-air data;

(3) General system of weather and NOTAM collection, dissemination, interpretation, and use;

(4) Interpretation and use of weather charts, maps, forecasts, sequence reports, abbreviations, [and] symbols;

(5) National Weather Service functions as they pertain to operations in the National Airspace System;

(6) Windshear and microburst awareness, identification, and avoidance;

(7) Principles of air navigation under instrument meteorological conditions in the National Airspace System;

(8) Air traffic control procedures and pilot responsibilities as they relate to en route operations, terminal area and radar operations, and instrument departure and approach procedures;

(9) Aircraft loading; weight and balance; use of charts, graphs, tables, formulas, and computations; and the effects on aircraft performance;

(10) Aerodynamics relating to an aircraft's flight characteristics and performance in normal and abnormal flight regimes;

(11) Human factors;

(12) Aeronautical decision making and judgment; and

(13) Crew resource management to include crew communication and coordination.

4. *Flight training.*

(a) [Each approved course must include at least 25 hours of flight training on the approved areas of operation listed in paragraph (c) of this section appropriate to the aircraft category and class rating for which the course applies. At least 15 hours of this flight training must be instrument flight training.]

(b) For the use of flight simulators or flight training devices—

(1) The course may include training in a flight simulator or flight training device, provided it is representative of the aircraft for which the course is approved, meets the requirements of this paragraph, and the training is given by an [authorized] instructor.

(2) Training in a flight simulator that meets the requirements of § 141.41(a) of this part may be credited for a maximum of 50 percent of the total flight training hour requirements of the

ing devices described in paragraphs (b)(2) and (b)(3) of this section, if used in combination, may be credited for a maximum of 50 percent of the total flight training hour requirements of the approved course, or of this section, whichever is less. However, credit for training in a flight training device that meets the requirements of § 141.41(b) cannot exceed the limitation provided for in paragraph (b)(3) of **[this]** section.

(c) Each approved course must include flight training on the approved areas of operation listed in this paragraph appropriate to the aircraft category and class rating for which the course applies:

(1) Preflight preparation;

5. *Stage checks and end-of-course tests.*

(a) Each student enrolled in an airline transport pilot course must satisfactorily accomplish the stage checks and end-of-course tests, in accordance with the school's approved training course, consisting of the approved areas of operation listed in paragraph (c) of section No. 4 of this appendix that are appropriate to the aircraft category and class rating for which the course applies.

(b) **[Each student must demonstrate satisfactory proficiency prior to receiving an endorsement to operate an aircraft in solo flight.]**

[(Amdt. 141-9, Eff. 8/4/97)]

1. *Applicability.* This appendix prescribes the minimum curriculum for a flight instructor certification course and an additional flight instructor rating course required under this part, for the following ratings:

- (a) Airplane single-engine.
- (b) Airplane multiengine.
- (c) Rotorcraft helicopter.
- (d) Rotorcraft gyroplane.
- (e) Powered-lift.
- (f) Glider category.

2. *Eligibility for enrollment.* A person must hold the following prior to enrolling in the flight portion of the flight instructor or additional flight instructor rating course:

(a) A commercial pilot certificate or an airline transport pilot certificate, with an aircraft category and class rating appropriate to the flight instructor rating for which the course applies; and

(b) An instrument rating or privilege in an aircraft that is appropriate to the aircraft category and class rating for which the course applies, if the course is for a flight instructor airplane or powered-lift instrument rating.

3. *Aeronautical knowledge training.*

(a) Each approved course must include at least the following ground training in the aeronautical knowledge areas listed in paragraph (b) of this section:

(1) 40 hours of training if the course is for an initial issuance of a flight instructor certificate; or

(2) 20 hours of training if the course is for an additional flight instructor rating.

(b) Ground training must include the following aeronautical knowledge areas:

(1) The fundamentals of instructing including—

- (i) The learning process;
- (ii) Elements of effective teaching;
- (iii) Student evaluation and testing;
- (iv) Course development;
- (v) Lesson planning; and
- (vi) Classroom training techniques.

(2) The aeronautical knowledge areas in which training is required for—

(i) A recreational, private, and commercial pilot certificate that is appropriate to the aircraft category and class rating for which the course applies; and

(ii) An instrument rating that is appropriate to the aircraft category and class rating for which the course applies, if the course is for an airplane or powered-lift aircraft rating.

(c) A student who satisfactorily completes 2 years of study on the principles of education at a college or university may be credited with no more than 20 hours of the training required in paragraph (a)(1) of this section.

4. *Flight training.*

(a) Each approved course must include at least the following flight training on the approved areas of operation of paragraph (c) of this section appropriate to the flight instructor rating for which the course applies:

(1) 25 hours, if the course is for an airplane, rotorcraft, or powered-lift rating; and

(2) [10 hours, which must include 10 flights, if the course is for a glider category rating.]

(b) For the use of flight simulators or flight training devices:

(1) The course may include training in a flight simulator or flight training device, provided it is representative of the aircraft for which the course is approved, meets the requirements of this paragraph, and the training is given by an [authorized] instructor.

(2) Training in a flight simulator that meets the requirements of § 141.41(a) of this part, may be credited for a maximum of 10 percent of the total flight training hour requirements of the approved course, or of this section, whichever is less.

(3) Training in a flight training device that meets the requirements of § 141.41(b) of this part, may be credited for a maximum of 5 percent of the total flight training hour requirements of the approved course, or of this section, whichever is less.

for in paragraph (b)(3) of this section.

(c) Each approved course must include flight training on the approved areas of operation listed in this paragraph that are appropriate to the aircraft category and class rating for which the course applies—

(1) *For an airplane—single-engine course:*

- (i) Fundamentals of instructing;
- (ii) Technical subject areas;
- (iii) Preflight preparation;
- (iv) Preflight lesson on a maneuver to be performed in flight;
- (v) Preflight procedures;
- (vi) Airport and seaplane base operations;
- (vii) Takeoffs, landings, and go-arounds;
- (viii) Fundamentals of flight;
- (ix) Performance maneuvers;
- (x) Ground reference maneuvers;
- (xi) Slow flight, stalls, and spins;
- (xii) Basic instrument maneuvers;
- (xiii) Emergency operations; and
- (xiv) Postflight procedures.

(2) *For an airplane—multiengine course:*

- (i) Fundamentals of instructing;
- (ii) Technical subject areas;
- (iii) Preflight preparation;
- (iv) Preflight lesson on a maneuver to be performed in flight;
- (v) Preflight procedures;
- (vi) Airport and seaplane base operations;
- (vii) Takeoffs, landings, and go-arounds;
- (viii) Fundamentals of flight;
- (ix) Performance maneuvers;
- (x) Ground reference maneuvers;
- (xi) Slow flight and stalls;
- (xii) Basic instrument maneuvers;
- (xiii) Emergency operations;
- (xiv) Multiengine operations; and
- (xv) Postflight procedures.

(3) *For a rotorcraft—helicopter course:*

- (i) Fundamentals of instructing;
- (ii) Technical subject areas;
- (iii) Preflight preparation;

(xi) Emergency operations;

(xii) Special operations; and

(xiii) Postflight procedures.

(4) *For a rotorcraft—gyroplane course:*

- (i) Fundamentals of instructing;
- (ii) Technical subject areas;
- (iii) Preflight preparation;
- (iv) Preflight lesson on a maneuver to be performed in flight;
- (v) Preflight procedures;
- (vi) Airport operations;
- (vii) Takeoffs, landings, and go-arounds;
- (viii) Fundamentals of flight;
- (ix) Performance maneuvers;
- (x) Flight at slow airspeeds;
- (xi) Ground reference maneuvers;
- (xii) Emergency operations; and
- (xiii) Postflight procedures.

(5) *For a powered-lift course:*

- (i) Fundamentals of instructing;
- (ii) Technical subject areas;
- (iii) Preflight preparation;
- (iv) Preflight lesson on a maneuver to be performed in flight;
- (v) Preflight procedures;
- (vi) Airport and heliport operations;
- (vii) Hovering maneuvers;
- (viii) Takeoffs, landings, and go-arounds;
- (ix) Fundamentals of flight;
- (x) Performance maneuvers;
- (xi) Ground reference maneuvers;
- (xii) Slow flight and stalls;
- (xiii) Basic instrument maneuvers;
- (xiv) Emergency operations;
- (xv) Special operations; and
- (xvi) Postflight procedures.

(6) *For a glider course:*

- (i) Fundamentals of instructing;
- (ii) Technical subject areas;
- (iii) Preflight preparation;
- (iv) Preflight lesson on a maneuver to be performed in flight;
- (v) Preflight procedures;

(xiii) Emergency operations; and

(xiv) Postflight procedures.

5. *Stage checks and end-of-course tests.*

(a) Each student enrolled in a flight instructor course must satisfactorily accomplish the stage checks and end-of-course tests, in accordance with the school's approved training course, consisting of the appropriate approved areas of operation listed

received ground and flight training on stall awareness, spin entry, spins, and spin recovery procedures in an aircraft that is certificated for spins and is appropriate to the rating sought; and

(2) Demonstrated instructional proficiency in stall awareness, spin entry, spins, and spin recovery procedures.

[(Amdt. 141-9, Eff. 8/4/97)]

1. *Applicability.* This appendix prescribes the minimum curriculum for a flight instructor instrument certification course required under this part, for the following ratings:

- (a) Flight Instructor Instrument—Airplane.
- (b) Flight Instructor Instrument—Helicopter.
- (c) Flight Instructor Instrument—Powered-lift aircraft.

2. *Eligibility for enrollment.* A person must hold the following prior to enrolling in the flight portion of the flight instructor instrument course:

(a) A commercial pilot certificate or airline transport pilot certificate with an aircraft category and class rating appropriate to the flight instructor category and class rating for which the course applies; and

(b) An instrument rating or privilege on that flight instructor applicant's pilot certificate that is appropriate to the flight instructor instrument rating (for an airplane-, helicopter-, or powered-lift-instrument rating, as appropriate) for which the course applies.

3. *Aeronautical knowledge training.*

(a) Each approved course must include at least 15 hours of ground training on the aeronautical knowledge areas listed in paragraph (b) of this section, appropriate to the flight instructor instrument rating (for an airplane-, helicopter-, or powered-lift-instrument rating, as appropriate) for which the course applies:

(b) Ground training must include the following aeronautical knowledge areas:

(1) The fundamentals of instructing including:

- (i) [The learning process;]
- (ii) Elements of effective teaching;
- (iii) Student evaluation and testing;
- (iv) Course development;
- (v) Lesson planning; and
- (vi) Classroom training techniques.

(2) The aeronautical knowledge areas in which training is required for an instrument rating that

is appropriate to the aircraft category and class rating for the course which applies.

4. *Flight training.*

(a) Each approved course must include at least 15 hours of flight training in the approved areas of operation of paragraph (c) of this section appropriate to the flight instructor rating for which the course applies.

(b) For the use of flight simulators or flight training devices:

(1) The course may include training in a flight simulator or flight training device, provided it is representative of the aircraft for which the course is approved for, meets requirements of this paragraph, and the training is given by an instructor.

(2) Training in a flight simulator that meets the requirements of § 141.41(a) of this part, may be credited for a maximum of 10 percent of the total flight training hour requirements of the approved course, or of this section, whichever is less.

(3) Training in a flight training device that meets the requirements of § 141.41(b) of this part, may be credited for a maximum of 5 percent of the total flight training hour requirements of the approved course, or of this section, whichever is less.

(4) Training in flight simulators or flight training devices described in paragraphs (b)(2) and (b)(3) of this section, if used in combination, may be credited for a maximum of 10 percent of the total flight training hour requirements of the approved course, or of this section, whichever is less. However, credit for training in a flight training device that meets the requirements of § 141.41(b) cannot exceed the limitation provided for in paragraph (b)(3) of this section.

(c) An approved course for the flight instructor-instrument rating must include flight training on the following approved areas of operation that are appropriate to the instrument-aircraft category and class rating for which the course applies:

- (7) Navigation systems;
- (8) Instrument approach procedures;
- (9) Emergency operations; and
- (10) Postflight procedures.

rating (for an airplane-, helicopter-, or powered-lift-instrument rating, as appropriate) for which the course applies.

【(Amdt. 141-9, Eff. 8/4/97)】

Appendix I—Additional Aircraft Category or Class Rating Course

1. *Applicability.* This appendix prescribes the minimum curriculum for an additional aircraft category rating course or an additional aircraft class rating course required under this part, for the following ratings:

- (a) Airplane single-engine.
- (b) Airplane multiengine.
- (c) Rotorcraft helicopter.
- (d) Rotorcraft gyroplane.
- (e) Powered-lift.
- (f) Glider.
- (g) Lighter-than-air airship.
- (h) Lighter-than-air balloon.

2. *Eligibility for enrollment.* A person must hold the level of pilot certificate for the additional aircraft category and class rating for which the course applies prior to enrolling in the flight portion of an additional aircraft category or additional aircraft class rating course.

3. *Aeronautical knowledge training.* [Each approved course for an additional aircraft category rating or additional aircraft class rating must include the ground training time requirements and ground training on the aeronautical knowledge areas that are specific to that aircraft category and class rating and pilot certificate level for which the course applies as required in appendix A, B, D, or E of this part, as appropriate.]

4. *Flight training.*

(a) [Each approved course for an additional aircraft category rating or additional aircraft class rating must include the flight training time requirements and flight training on the areas of operation that are specific to that aircraft category and class rating and pilot certificate level for which the course applies as required in appendix A, B, D, or E of this part, as appropriate.]

(b) For the use of flight simulators or flight training devices:

- (1) The course may include training in a flight simulator or flight training device, provided it

is representative of the aircraft for which the course is approved, meets the requirements of this paragraph, and the training is given by an [authorized] instructor.

(2) Training in a flight simulator that meets the requirements of § 141.41(a) of this part may be credited for a maximum of [30] percent of the total flight training hour requirements of the approved course, or of this section, whichever is less.

(3) Training in a flight training device that meets the requirements of § 141.41(b) of this part may be credited for a maximum of [20] percent of the total flight training hour requirements of the approved course, or of this section, whichever is less.

(4) Training in the flight simulators or flight training devices described in paragraphs (b)(2) and (b)(3) of this section, if used in combination, may be credited for a maximum of [30] percent of the total flight training hour requirements of the approved course, or of this section, whichever is less. However, credit for training in a flight training device that meets the requirements of § 141.41(b) cannot exceed the limitation provided for in paragraph (c)(3) of this section.

5. *Stage checks and end-of-course tests.*

(a) Each student enrolled in an additional aircraft category rating course or an additional aircraft class rating course must satisfactorily accomplish the stage checks and end-of-course tests, in accordance with the school's approved training course, consisting of the approved areas of operation in section No. 4 of this appendix that are appropriate to the aircraft category and class rating for which the course applies at the appropriate pilot certificate level.

(b) [Each student must demonstrate satisfactory proficiency prior to receiving an endorsement to operate an aircraft in solo flight.]

[(Amdt. 141-9, Eff. 8/4/97)]

Appendix J—Aircraft Type Rating Course, For Other Than an Airline Transport Pilot Certificate

1. *Applicability.* This appendix prescribes the minimum curriculum for an aircraft type rating course other than an airline transport pilot certificate, for:

(a) A type rating in an airplane category—single-engine class.

(b) A type rating in an airplane category—multi-engine class.

(c) A type rating in a rotorcraft category—helicopter class.

(d) A type rating in a powered-lift category.

(e) Other aircraft type ratings specified by the Administrator through the aircraft type certificate procedures.

2. *Eligibility for enrollment.* Prior to enrolling in the flight portion of an aircraft type rating course, a person must hold at least a private pilot certificate and:

(a) An instrument rating in the category and class of aircraft that is appropriate to the aircraft type rating for which the course applies, provided the aircraft's type certificate does not have a VFR limitation; or

(b) Be concurrently enrolled in an instrument rating course in the category and class of aircraft that is appropriate to the aircraft type rating for which the course applies, and pass the required instrument rating practical test concurrently with the aircraft type rating practical test.

3. *Aeronautical knowledge training.*

(a) Each approved course must include at least 10 hours of ground training on the aeronautical knowledge areas listed in paragraph (b) of this section, appropriate to the aircraft type rating for which the course applies.

(b) Ground training must include the following aeronautical areas:

(1) Proper control of airspeed, configuration, direction, altitude, and attitude in accordance with procedures and limitations contained in the aircraft's flight manual, checklists, or other approved material appropriate to the aircraft type;

(2) Compliance with approved en route, instrument approach, missed approach, ATC, or

other applicable procedures that apply to the aircraft type;

(3) Subjects requiring a practical knowledge of the aircraft type and its powerplant, systems, components, operational, and performance factors;

(4) The aircraft's normal, abnormal, and emergency procedures, and the operations and limitations relating thereto;

(5) Appropriate provisions of the approved aircraft's flight manual;

(6) [Location for and purpose for inspecting each item on the aircraft's checklist that relates to the exterior and interior preflight; and]

(7) Use of the aircraft's prestart checklist, appropriate control system checks, starting procedures, radio and electronic equipment checks, and the selection of proper navigation and communication radio facilities and frequencies.

4. *Flight training.*

(a) Each approved course must include at least:

(1) Flight training on the approved areas of operation of paragraph (c) of this section in the aircraft type for which the course applies; and

(2) 10 hours of training of which at least 5 hours must be instrument training in the aircraft for which the course applies.

(b) For the use of flight simulators or flight training devices:

(1) The course may include training in a flight simulator or flight training device, provided it is representative of the aircraft for which the course is approved, meets requirements of this paragraph, and the training is given by an [authorized] instructor.

(2) Training in a flight simulator that meets the requirements of § 141.41(a) of this part, may be credited for a maximum of 50 percent of the total flight training hour requirements of the approved course, or of this section, whichever is less.

(3) Training in a flight training device that meets the requirements of § 141.41(b) of this part, may be credited for a maximum of 25 percent

is less. However, credit training in a flight training device that meets the requirements of § 141.41(b) cannot exceed the limitation provided for in paragraph (b)(3) of this section.

(c) Each approved course must include the flight training on the areas of operation listed in this paragraph, that are appropriate to the aircraft category and class rating for which the course applies:

(1) *A type rating for an airplane—single-engine course:*

- (i) Preflight preparation;
- (ii) Preflight procedures;
- (iii) Takeoff and departure phase;
- (iv) In-flight maneuvers;
- (v) Instrument procedures;
- (vi) Landings and approaches to landings;
- (vii) Normal and abnormal procedures;
- (viii) Emergency procedures; and
- (ix) Postflight procedures.

(2) *A type rating for an airplane—multiengine course:*

- (i) Preflight preparation;
- (ii) Preflight procedures;
- (iii) Takeoff and departure phase;
- (iv) In-flight maneuvers;
- (v) Instrument procedures;
- (vi) Landings and approaches to landings;
- (vii) Normal and abnormal procedures;
- (viii) Emergency procedures; and
- (ix) Postflight procedures.

(3) *A type rating for a powered-lift course:*

- (i) Preflight preparation;
- (ii) Preflight procedures;
- (iii) Takeoff and departure phase;

- (i) Preflight preparation;
- (ii) Preflight procedures;
- (iii) Takeoff and departure phase;
- (iv) In-flight maneuvers;
- (v) Instrument procedures;
- (vi) Landings and approaches to landings;
- (vii) Normal and abnormal procedures;
- (viii) Emergency procedures; and
- (ix) Postflight procedures.

(5) *Other aircraft type ratings specified by the Administrator through aircraft type certificate procedures:*

- (i) Preflight preparation;
- (ii) Preflight procedures;
- (iii) Takeoff and departure phase;
- (iv) In-flight maneuvers;
- (v) Instrument procedures;
- (vi) Landings and approaches to landings;
- (vii) Normal and abnormal procedures;
- (viii) Emergency procedures; and
- (ix) Postflight procedures.

5. *Stage checks and end-of-course tests.*

(a) Each student enrolled in an aircraft type rating course must satisfactorily accomplish the stage checks and end-of-course tests, in accordance with the school's approved training course, consisting of the approved areas of operation that are appropriate to the aircraft type rating for which the course applies at the airline transport pilot certificate level; and

(b) **Each student must demonstrate satisfactory proficiency prior to receiving an endorsement to operate an aircraft in solo flight.**

[(Amdt. 141-9, Eff. 8/4/97)]

1. *Applicability.* This appendix prescribes the minimum curriculum for the special preparation courses that are listed in § 141.11 of this part.

2. *Eligibility for enrollment.* Prior to enrolling in the flight portion of a special preparation course, a person must hold a pilot certificate, flight instructor certificate, or ground instructor certificate that is appropriate for the exercise of the operating privileges or authorizations sought.

3. *General requirements.*

(a) To be approved, a special preparation course must:

(1) Meet the appropriate requirements of this appendix; and

(2) Prepare the graduate with the necessary skills, competency, and proficiency to exercise safely the privileges of the certificate, rating, or authorization for which the course is established.

(b) An approved special preparation course must include ground and flight training on the operating privileges or authorization sought, for developing competency, proficiency, resourcefulness, self-confidence, and self-reliance in the student.

4. *Use of flight simulators or flight training devices.*

(a) The approved special preparation course may include training in a flight simulator or flight training device, provided it is representative of the aircraft for which the course is approved, meets requirements of this paragraph, and the training is given by an [authorized] instructor.

(b) Training in a flight simulator that meets the requirements of § 141.41(a) of this part, may be credited for a maximum of 10 percent of the total flight training hour requirements of the approved course, or of this section, whichever is less.

(c) Training in a flight training device that meets the requirements of § 141.41(b) of this part, may be credited for a maximum of 5 percent of the total flight training hour requirements of the approved course, or of this section, whichever is less.

(d) Training in the flight simulators or flight training devices described in paragraphs (b) and (c) of this section, if used in combination, may be credited for a maximum of 10 percent of the

total flight training hour requirements of the approved course, or of this section, whichever is less. However, credit for training in a flight training device that meets the requirements of § 141.41(b) cannot exceed the limitation provided for in paragraph (c) of this section.

5. *Stage check and end-of-course tests.* Each person enrolled in a special preparation course must satisfactorily accomplish the stage checks and end-of-course tests, in accordance with the school's approved training course, consisting of the approved areas of operation that are appropriate to the operating privileges or authorization sought, and for which the course applies.

6. *Agricultural aircraft operations course.* An approved special preparation course for pilots in agricultural aircraft operations must include at least the following—

(a) 25 hours of training on:

(1) Agricultural aircraft operations;

(2) Safe piloting [and] operating practices and procedures for handling, dispensing, and disposing agricultural and industrial chemicals, including operating in and around congested areas; and

(3) Applicable provisions of part 137 of this chapter.

(b) 15 hours of flight training on agricultural aircraft operations.

7. *Rotorcraft external-load operations course.* An approved special preparation course for pilots of external-load operations must include at least the following—

(a) 10 hours of training on:

(1) Rotorcraft external-load operations;

(2) Safe piloting [and] operating practices and procedures for external-load operations, including operating in and around congested areas; and

(3) Applicable provisions of part 133 of this chapter.

(b) 15 hours of flight training on external-load operations.

8. *Test pilot course.* An approved special preparation course for pilots in test pilot duties must include at least the following—

(a) Aeronautical knowledge training on:

- (4) Test pilot duties and responsibilities.
- (b) 15 hours of flight training on test pilot duties and responsibilities.

9. *Special operations course.* An approved special preparation course for pilots in special operations that are mission-specific for certain aircraft must include at least the following—

- (a) Aeronautical knowledge training on:
 - (1) Performing that special flight operation;
 - (2) Safe piloting operating practices and procedures for performing that special flight operation;
 - (3) Applicable parts of this chapter that pertain to that special flight operation; and
 - (4) Pilot in command duties and responsibilities for performing that special flight operation.
- (b) Flight training:
 - (1) On that special flight operation; and
 - (2) To develop skills, competency, proficiency, resourcefulness, self-confidence, and self-reliance in the student for performing that special flight operation in a safe manner.

10. *Pilot refresher course.* An approved special preparation pilot refresher course for a pilot certificate, aircraft category and class rating, or an instrument rating must include at least the following—

- (a) 4 hours of aeronautical knowledge training on:
 - (1) The aeronautical knowledge areas that are applicable to the level of pilot certificate, aircraft category and class rating, or instrument rating, as appropriate, that pertain to that course;
 - (2) Safe piloting operating practices and procedures; and
 - (3) Applicable provisions of parts 61 and 91 of this chapter for pilots.
- (b) 6 hours of flight training on the approved areas of operation that are applicable to the level

(a) Aeronautical knowledge training on:

- (1) The aeronautical knowledge areas of part 61 of this chapter that apply to student, recreational, private, and commercial pilot certificates and instrument ratings;
- (2) The aeronautical knowledge areas of part 61 of this chapter that apply to flight instructor certificates;
- (3) Safe piloting operating practices and procedures, including airport operations and operating in the National Airspace System; and
- (4) Applicable provisions of parts 61 and 91 of this chapter that apply to pilots and flight instructors.

(b) Flight training to review:

- (1) The approved areas of operations applicable to student, recreational, private, and commercial pilot certificates and instrument ratings; and
- (2) The skills, competency, and proficiency for performing flight instructor duties and responsibilities.

12. *Ground instructor refresher course.* An approved special preparation ground instructor refresher course must include at least 16 hours of aeronautical knowledge training on:

- (a) The aeronautical knowledge areas of part 61 of this chapter that apply to student, recreational, private, and commercial pilots and instrument rated pilots;
- (b) The aeronautical knowledge areas of part 61 of this chapter that apply to ground instructors;
- (c) Safe piloting operating practices and procedures, including airport operations and operating in the National Airspace System; and
- (d) Applicable provisions of parts 61 and 91 of this chapter that apply to pilots and ground instructors.

[(Amdt. 141-9, Eff. 8/4/97)]

